[H.A.S.C. No. 113–93]

HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2015

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

SUBCOMMITTEE ON STRATEGIC FORCES HEARING

ON

FISCAL YEAR 2015 NATIONAL DEFENSE AUTHORIZATION BUDGET REQUEST FOR MISSILE DEFENSE PROGRAMS

HEARING HELD
MARCH 25, 2014

U.S. GOVERNMENT PUBLISHING OFFICE
87–856 WASHINGTON : 2015

For sale by the Superintendent of Documents, U.S. Government Publishing Office
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FISCAL YEAR 2015 NATIONAL DEFENSE AUTHORIZATION BUDGET REQUEST FOR MISSILE DEFENSE PROGRAMS

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON STRATEGIC FORCES,
Washington, DC, Tuesday, March 25, 2014.

The subcommittee met, pursuant to call, at 3:32 p.m., in room 2118, Rayburn House Office Building, Hon. Mike Rogers (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. MIKE ROGERS, A REPRESENTATIVE FROM ALABAMA, CHAIRMAN, SUBCOMMITTEE ON STRATEGIC FORCES

Mr. ROGERS. This committee will come to order.

When this President was elected he promised to reset with Russia, suggesting that the previous administration was to blame for a negative relationship with Russia as well as the rising of the seas and various other straw men. To support that reset, he slashed our missile defenses, which Russia has never liked. He didn't trade them to Russia. The President gave them away for nothing. This isn't the third site which everyone, including our allies, found out about in the middle of a September night in 2009.

He also canceled the Multiple Kill Vehicle [MKV] program, the Kinetic Energy Interceptor, and the Airborne Laser and other programs. He didn't test the mainstay of the GMD [Ground-based Midcourse Defense] fleet for 5 years. He has slashed the missile defense budget from a projected $9.4 billion to $7.8 billion in just 1 year. Prior to ever proposing the sequester, the President cut more than $3.7 billion out of Missile Defense Agency budgets, and then pleads poverty when it comes to our East Coast site to protect the United States from an Iranian ballistic missile program, which the Intelligence Community has consistently warned could reach maturity by 2015.

If you look at the missile defense budget over time, which you can do on the TV monitors around the room—are those up—you will realize that the fiscal year 2015 budget request proposal by the administration is actually the lowest since the Clinton administration's fiscal year 2001 budget, which was prior to the U.S. withdrawal from the ABM [Anti-Ballistic Missile] treaty.

[The information referred to can be found in the Appendix on page 95.]

Mr. ROGERS. But we have a reset with Russia. And, of course, today we see the results of this reset on the ground in Ukraine.

We see increasing signs of Putinist intervention in Estonia and Georgia. And the President, where is he? He is deploying additional U.S. forces to hunt down African warlords before he even sent promised MREs [meals, ready to eat] to the Ukraine. If you had told me in 2009 that this is where we would be in 2014, with another 2½ years of what passes for leadership ahead of us, I would have told you not in America. No American President would ever surrender our responsibility to lead in favor of leading from behind.

We are here today dealing with the President's fiscal year 2015 missile defense budget request. We have come full circle. The President will propose the policies he wants, but he can't get them funded unless we let him. As chairman of this subcommittee, I want to make it clear he will get no help from me. Weakness is a choice. I choose peace through strength. That is why my colleagues Ted Poe and Joe Heck join me in introducing a bicameral resolution with Senator Rubio calling on the President to declare Russia to be in violation of the INF [Intermediate-Range Nuclear Forces] Treaty, something we have reportedly known about for years.

We simply cannot allow Vladimir Putin to continue to think he can get away with whatever he wants without consequences, as he is doing today in Ukraine and elsewhere. To the witnesses, let me be clear these remarks and my concerns do not rest with you. Admiral and General, your lifetime of service is a credit to your Nation and we owe you a debt of gratitude to you and your families. Ms. Bunn, I have reviewed your bio and know that you are here today out of a sense of service to our Nation, and I thank you.

But the present trajectory is all too reminiscent to me of earlier years of failed leadership and retrenchment. My reading of history informs me that each previous era was followed quickly by a devastating, and likely avoidable, war. I don't know that this time will be any different, but with unanimous consent I will add my full statement for the record.

And with that, I recognize my good friend and colleague, Mr. Cooper, from Tennessee.

[The prepared statement of Mr. Rogers can be found in the Appendix on page 31.]

STATEMENT OF HON. JIM COOPER, A REPRESENTATIVE FROM TENNESSEE, RANKING MEMBER, SUBCOMMITTEE ON STRATEGIC FORCES

Mr. COOPER. Thank you, Mr. Chairman. I thought you sounded better with the mic off.

[Laughter.]

Mr. COOPER. And I am very glad that you did not read your entire statement. Because if it was like what we heard, I only shudder at the consequences. This must be an election year. I thought that statement, from my good friend, was needlessly alarmist and partisan. You know, I yearn for the days when Americans pulled together and politics stopped at the water's edge, especially in moments of uncertainty and some crisis around the world.

I think it is a serious mistake to just have a political policy of blaming everything on the President. I hope that the chairman read the memo. Because in the committee memo it says things like phase four of the planned deployment of 2020 is now terminated.

And the committee's own memo says as a result of congressional budget actions. The President can be faulted for many things, but some parts of the missile defense budget are actually increased substantially.

And for the chairman to blame sequestration on the President, saying that he proposed it, sequestration was never intended to go into effect. The congressional supercommittee was supposed to come up with a sensible solution to our budget problems, and yet we still have no solution. So regardless of the needless partisan fighting here, I think it is a mistake to make broadside charges, like the President virtually ignoring threats around the world. Give me a break.

We are all Americans, we all want a stronger country, we all want a strong missile defense, and we all should pay for it. So I hope my colleagues, particularly on the majority side, will help us figure out to pay for the defense they brag about so much. Because we have short-funded defense for a long time, and also hamstrung the Pentagon by not allowing the Pentagon the flexibility to put money where it needs to be put.

So I hate to make a statement like this, Mr. Chairman, but you were a little bit out of bounds, I thought, in your remarks. So let's have a better tone for the remainder of the hearing.

Mr. ROGERS. I thank my friend and colleague from Tennessee.

Lieutenant General Mann, you are recognized for your opening statement.

STATEMENT OF LTG DAVID L. MANN, USA, COMMANDER, JOINT FUNCTIONAL COMPONENT COMMAND FOR INTEGRATED MISSILE DEFENSE, UNITED STATES STRATEGIC COMMAND

General MANN. Chairman Rogers, Ranking Member Cooper, other members of the subcommittee, thank you for your continued support of our soldiers, civilians, and their families. This is my first appearance before this subcommittee, and it is an honor to appear before you today to discuss the importance of missile defense for our Nation and the need to maintain these capabilities in the face of a maturing threat and declining budgets.

Today, I would like to briefly discuss global missile defense operations in the Space and Missile Defense Command/Army Forces Strategic Command's role as a force provider. To accomplish our assigned missions, we have three core tasks. First, to provide trained and ready missile defense forces today. Secondly, to build future missile defense forces and capabilities for tomorrow. And third, to develop future technologies for the day after tomorrow.

In addition, I would like to outline the role of the Joint Functional Component Command for Integrated Missile Defense as an operational integrator on behalf of Strategic Command. We execute four tasks in support of these responsibilities. First, to synchronize operational planning. Secondly, to support ongoing operations in asset management. Third, to integrate training and exercises and test activities. And finally, to advocate for future capabilities.

This subcommittee's continued support of missile defense and of our soldiers, sailors, airmen and marines, and civilians, who develop, deploy, and operate these missile defense capabilities is ex-

tremely essential. Again, I appreciate the opportunity to talk about the importance of missile defense, and look forward to answering any questions that you may have.

Thank you.

[The prepared statement of General Mann can be found in the Appendix on page 36.]

Mr. ROGERS. I thank you, General, and thank you for your service.

Admiral Syring.

STATEMENT OF VADM JAMES D. SYRING, USN, DIRECTOR, MISSILE DEFENSE AGENCY

Admiral SYRING. Good afternoon, Chairman Rogers, Ranking Member Cooper, distinguished members of the subcommittee. I greatly appreciate the opportunity to testify in front of you today. Our budget request for fiscal year 2015 will support the warfighter and needs of the combatant commanders by continuing the development of the integrated ballistic missile system to protect our Nation, deployed forces, allies, and international partners from an ever-increasingly capable enemy ballistic missile.

My highest near-term priority remains the successful GMD intercept flight test of the CE [Capability Enhancement]-II Exoatmospheric Kill Vehicle [EKV]. In January of 2013, we conducted a highly successful non-intercept flight of the CE–II EKV. The EKV's performance exceeded our expectations and confirmed that we are on the right path to return the GMD system to rigorous flight testing. I am confident that we have fixed the problem we encountered in the December 2010 test, and look forward to conducting FTG–06b intercept tests this summer.

Sir, I am also optimistic we have identified the root cause of the intercept failure of the first generation EKV last July. In FTG–07, the CE–I kill vehicle and the GBI [Ground-based Interceptor] did not separate from the booster's third stage. We have accounted for the issue in our preparations for the upcoming flight test, and are working towards a correction to the entire fleet before the end of this year.

With this budget, we will maintain our commitment to build out homeland defenses from 30 to 44 GBIs, and take steps significantly to redirect the GMD program and up our homeland defense. In 2015, we will begin to redesign and approve the GBI EKV. The new EKVs will be more producable, testable, reliable, cost-effective, and eventually replace the kill vehicle used in our GBI fleet. Because we believe that improving our discrimination capability will improve the overall performance of our existing homeland defense we will begin development of long-range discriminating radar, with deployment planned in 2020.

The new long-range, mid-course tracking radar will provide persistent coverage and improved discrimination capabilities against threats to the homeland from the Pacific theater. Our budget request continues our strong support of regional defense initiatives, and includes investments in our future advanced capabilities. Continuing efforts to improve the performance of the Aegis weapons system, we will procure 30 Standard Missile Block IB guided mis-

siles in fiscal year 2015, plus advanced procurement for a multiyear procurement request in fiscal year 2016.

We plan to increase the SM–3 delivery rate in the out-years. In fiscal year 2015, we will also procure 31 interceptors for THAAD [Terminal High Altitude Area Defense] and, pursuant to our agreement with the Army, fund additional TPY–2 radar spares and an additional THAAD battery. Phase two and phase three of the European Phased Adaptive Approach are on schedule and will meet the Presidential mandate for deployment.

The Aegis Ashore site in Deveselu, Romania, will be integrated into the Yukon command and control network, tested, and operational by December 2015 to support phase two. This budget also supports continued procurement of equipment for Aegis Ashore in Poland, which is planned to be operational in a 2018 timeframe. The SM–3 Block IIA, under co-development with the Japanese government, and an upgraded version of the Aegis weapons system are also both on schedule and available for deployment in 2018.

We are preparing for Aegis Ashore flight tests at the Pacific missile range facility in Hawaii this year and again in 2015. In 2015, we plan to conduct 15 flight tests. We will continue to test elements of the system to demonstrate that they work before they are fielded. Our advanced technology investments will enable us to deploy a future BMDS [Ballistic Missile Defense System] architecture more capable of discriminating and killing reentry vehicles with a high degree of confidence. It is vital that we provide the warfighters the most advanced, cost-effective, and reliable weapons systems they need to do their jobs.

Thank you, Mr. Chairman. I look forward to the committee's questions.

[The prepared statement of Admiral Syring can be found in the Appendix on page 54.]

Mr. ROGERS. I thank you, Admiral.

And Ms. Bunn, the floor is yours to summarize your statement.

STATEMENT OF M. ELAINE BUNN, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR NUCLEAR AND MISSILE DEFENSE POLICY, DEPARTMENT OF DEFENSE

Ms. BUNN. Thank you, Chairman Rogers, Ranking Member Cooper, distinguished members of the subcommittee. Thank you for the opportunity to testify today on the Department's fiscal year 2015 budget request. And I do want to thank all of you for your contributions in providing for the common defense.

Missile defense is a critical national security priority, both for the protection of the United States and for the defense of our deployed forces and our allies. I would like to submit my full written statement for the record, but I will highlight a few key points now, if I could.

Our first missile defense policy priority is the defense of the United States against the threat of limited ballistic missile attack. We currently have coverage of the U.S. homeland against potential ICBM attacks from states like North Korea and Iran. To ensure that we stay ahead of the threat, we are taking several steps to strengthen our homeland defense posture. We are deploying 14 additional interceptors in Alaska and a second missile defense radar

to Japan, and requesting funding for the development of a radar that, when it is deployed in Alaska, will provide persistent sensor coverage and improved discrimination capabilities against threats to the homeland from North Korea.

Also for homeland defense, as Admiral Syring mentioned we are initiating a redesign of the kill vehicle for the Ground-based Interceptor. Investment in the next generation kill vehicle for the GBI is especially important, considering the issues associated with the current kill vehicles that were discovered during testing. As directed by Congress, MDA [Missile Defense Agency] is also evaluating four potential locations in the United States for additional interceptors.

Conducting the evaluation and the associated environmental impact statement process will shorten the construction timelines associated with deployment of a new missile site. We have not made a decision to build an additional missile field in the United States. While an additional missile defense site could be used to improve our homeland defenses in the future, our highest funding priorities are focused on improving interceptor reliability and performance along with improving sensor coverage and discrimination for homeland defense.

Strengthening our regional missile defense posture is also a key policy priority. We are continuing to implement regional missile defenses that are tailored to Europe, to the Middle East, to Asia-Pacific. Our focus is on developing and fielding capabilities that are mobile and capable of being redeployed, as necessary, to address the threat. We are also encouraging our allies and partners to acquire missile defenses and to strengthen operational missile defense cooperation.

Our missile defense deployments to Europe are especially important for reassuring allies of our commitment to the security of the NATO [North Atlantic Treaty Organization] Alliance. We already maintain a missile defense ship presence in the eastern Mediterranean, along with a radar deployed in Turkey; those have been there since 2011. And our plans to deploy Aegis Ashore sites to Romania in 2015 and Poland in 2018 are, as Admiral Syring said, on schedule.

With regard to talks with Russia on transparency and cooperation, Russia's intervention in Ukraine, in violation of international law, led to the suspension of our military-to-military dialogues, including DOD [Department of Defense] civilians. And we have subsequently not continued to engage Russia on the topic of missile defense.

In summary, we have made very significant progress deploying missile defenses and cooperating with allies and partners, but we cannot afford to stand still. The President's budget request reflects our goal of retaining the flexibility to adjust and enhance our defenses as the threat and technologies evolve. Thank you for inviting me here today.

And I look forward to your questions.

[The prepared statement of Ms. Bunn can be found in the Appendix on page 83.]

Mr. ROGERS. I thank you, Ms. Bunn. And I will start off with the questions.

Admiral Syring, I am concerned with Russia's behavior threatening our allies, including the illegal invasion of Ukraine and its violation of the INF Treaty. Are you concerned about those things?

Admiral SYRING. Yes, sir.

Mr. ROGERS. Can you tell me what is the organic capability of the Aegis Ashore to detect cruise missiles?

Admiral SYRING. It is currently not configured for cruise missiles. It is configured against the ballistic missile defense threat.

Mr. ROGERS. What would be the capability if we deployed the SM–2s and the SM–6s at those sites, in addition to the SM–3s?

Admiral SYRING. Again, sir, it hasn't been designed for the SM–2. As you know, we have a seaborne capability with SM–2s and SM–6s that is possible. Sir, I would have to defer to Policy or State Department on that needed capability.

Mr. ROGERS. What is the functional difference?

Admiral SYRING. Essentially, the software, with a minor hardware addition.

Mr. ROGERS. You made reference in your testimony, and Ms. Bunn confirmed, that you are on time for the Romania and Poland Aegis Ashore sites. If the President were to come to you and say I need you to step that up, as a consequence of the Ukrainian activity by Russia, would you be able to, if he gave you the money, if money was not the issue, to step that up and make it happen quicker?

Admiral SYRING. We have analyzed that. It can be done quicker if money were available. But the budget request supports a 2018 fielding at this point.

Mr. ROGERS. Okay. I support the additional funding of the GMD program that you have requested for a new redesigned kill vehicle and new investments in discrimination. Absent these investments, however, the GMD system is actually being cut in your fiscal year 2015 budget. Why?

Admiral SYRING. If I can, sir, talk about the overall—I will talk about the GM program, but let me put it in the overall homeland defense category. In terms of—you and I have had many discussions on the need to improve our homeland defense. And that includes increasing our discrimination capability, increasing our long-range radar capability, getting started with the redesign of the EKV; all fundamental parts of homeland defense.

And those were marked increases in this year's budget. And the GM budget did go down slightly. But with the addition of the EKV and the other aspects of homeland defense, I am confident we are on solid footing. That said, a big part of what I will do, and have been doing, is looking inside the fundamentals of the GM program, the first of which was the EKV development which I recommended and then the Department supported.

There are other aspects of the GMD program that I will be looking at in the 2016 budget submission for increased funding.

Mr. ROGERS. Are we making sufficient investments to pay for the life cycle, maintenance and aging and reliability for this 10-year-old system which, as you know, was deployed with a 20-year design life?

Admiral SYRING. Not as much as I would like.

Mr. ROGERS. Okay. And finally, Admiral Syring, and then I will yield and, hopefully, have a second round of questions. But I do want to ask you, your budget request for 2015 includes funding for several important new initiatives for homeland missile defense, including a new long-range radar, new discrimination systems, and a new homeland defense kill vehicle. What happens to these investments if the sequestration returns in 2016, as is currently the law of the land?

Admiral SYRING. Everything would be put back on the table for reconsideration and, possibly, stopped.

Mr. ROGERS. Thank you.

On that depressing note, I will yield to my friend and colleague, Mr. Cooper, from Tennessee.

Mr. COOPER. The chairman and I actually get along very well. We had a nice breakfast together, talking about submarines. It is amazing to me that I was blindsided by his statement. And also, I think, the tone is just unfortunate. But rather than prolong that, I think it is important that the public get the facts. Of course, we in a democracy operate at a disadvantage because other nations don't have hearings like this and they don't air their dirty laundry to the world and they don't express disagreements.

I hope that the public understands that, you know, we can have as strong a defense as we want to have, but just got to pay for it. Not borrow the money from China, as we have been doing. And in terms of getting more money for projects, the Pentagon testified for us, the Secretary of Defense, the Chairman of the Joint Chiefs, and the Comptroller, that currently, in the Pentagon, we have 25 percent surplus capacity. And this Congress, this committee, refuses to allow the Pentagon to do anything about that because those bases are located in particular Members' districts.

So people who complain about a shortage of funding, and then don't allow the Pentagon to prioritize, are people who are not willing to fund our warfighters overseas and at home, should stop complaining. This budget—you know, we wish it could be better, and it can be better if Congress has the gumption to vote for a better or stronger budget. Left unsaid in the chairman's remarks is the last three tests of Ground-based Interceptors have failed, and we have to acknowledge that.

And that doesn't mean it is a bad program. When America ventured into rocketry, many of our missiles failed. But we solved those problems. We are a can-do nation and, as the admiral testified, we will solve this problem. I hope your confidence is not misplaced right now because the next test is, what, in June? So——

Admiral SYRING. Yes, sir.

Mr. COOPER. So, you know, I want to be an optimist about. But the GAO [Government Accountability Office] and others have reported that, you know, we should—and I think the admiral supports this, we should fly before we buy. Don't get a pig in a poke. This idea of concurrent development has stung this committee and stung the American taxpayer for a long time. So we want to be as strong as we can be, but there are certain limits to technology so far. And let's push those limits, let's make it happen.

Everyone wants to do all they can for Ukraine and the good folks over there right now, but we have to be prudent and thoughtful in

the way we propose interventions. And this is not a foreign policy committee. We should be an enabling committee to allow the Pentagon to have the weapons systems and the troops that it needs. Someone once said that sequestration was worse than any enemy attack that had ever been launched on us because it hit so many points in Pentagon programs that no enemy could have been that innovative, that creative, that forceful to disrupt so many of our operations.

Well, this committee has the power to start stopping that mess if we have got the gumption to do so. So I appreciate the witnesses being here. I hope that we can limit the political talk during an election year. Everyone on this subcommittee, to my knowledge, is for a strongest possible missile defense. You know, we will make that happen. And quibbling over this or that does not really strengthen the country.

I yield the balance of my time.

Mr. ROGERS. We really are good friends. You ought to hear me and my wife if you think this is bad. Who is next?

Mr. Franks of Arizona is recognized for 5 minutes for any questions he may have.

Mr. FRANKS. Well, thank you, Mr. Chairman. And thank you, Ms. Bunn, for being here and your contribution to the country. And Admiral Syring and General Mann, I want to say a special gratitude to you and all of the people in uniform. I think that your station in this arsenal of freedom is almost impossible to overstate in its importance. So many people across the world may not realize it, but we all owe you a debt of gratitude for your commitment to the peace and security, really, of the whole world. And I am grateful to you.

With that, I have to go on record here as associating myself very vigorously with the chairman's opening statement. Some of the debates that he outlined not only were on target, in my judgment, but far preceded any election year. And sometimes the importance of facing mistakes presently is to, hopefully, prevent repeating them. And so I want to go on record that way.

Admiral Syring, today we see the smallest budget request for missile defense in the 5 years that this President has submitted a budget to Congress. And if one were only to look objectively at our budget, I think he or she would think that the world is much more safe and that the ballistic missile proliferation is not rampant and at historic levels. But putting aside my own personal feelings about what I believe to be an extremely dangerous trend, I am curious about the future of ballistic missile defense.

We have a request for only $13 million for directed-energy technology. And can you tell the committee what other promising technologies the agency is working on, and what is the best hedge strategy, and what about the amounts we are spending today for limited ballistic missile defense? And how we best can prepare for the future to include the new EKV and the MKV.

Admiral SYRING. Sir, let me cover all that at once. And I will string this together in a coherent explanation. The $13 million that you spoke about is really the work that is going on at the two facilities that are doing our experimentation: MIT [Massachusetts Institute of Technology] Lincoln Lab, and DARPA [Defense Advanced

Research Projects Agency], which are teamed; and then Lawrence Livermore out on the West Coast. They are working on two very promising technologies in the solid-state laser arena.

And it is technology, it is high-end technology. To do what they are doing, with an eye towards someday how do you package that into something that could be put into an airborne platform or a sea-based platform, it is a very, very difficult problem. They are both making progress. The DPALs—diode-pumped alkali laser system—out at Livermore is tested to 4 kilowatts. It will be to 10 kilowatts by the end of 2015.

MIT has made a little bit more progress, but for a different reason—and I will explain that—is at 20 kilowatts with a plan to scale to 30 by the end of—30 kilowatts by the end of 2015. It is somewhat paced by funding, unfortunately. But the reality of the budget is such that the technology is moving in line with where the budget is in terms of technology can only move so fast. We could go faster, but we are moving at the pace of demonstration, at this point.

It is new inventions. It is critical to where we want to be, both for discrimination technology in terms of being in the hundreds of kilowatt regime, to the high-end, high-power laser hard kill capability, which we need to be at a megawatt, or higher even, which we demonstrated on an airborne laser. So there is seed work going on there. There is work, as well, in the classified arena, which I can't speak today about but would be happy to talk to you and the committee about that in a more substantial manner.

Certainly, lasers and laser technology is where we want to be from a discrimination standpoint. And I would submit, down the road, to change the cost equation on cost-per-kill on the hard kill side, as well. So I agree with that.

Mr. FRANKS. Thank you.

Admiral SYRING. There—if I can, just one more, sir. There is also a lot of other classified programs that I can explain off-line.

Mr. FRANKS. I look forward to that.

Mr. Chairman, some of us—and I know you are, as well—concerned very much about the sequestration. And just for the record, that was indeed proposed by our President. And there are many of us on this committee that voted against that simply because we were afraid that, indeed, the sequestration would take place. And this makes it difficult, I know, for multiyear procurement authority.

And related to the SM–3 IB, Admiral Syring, why is this multiyear procurement authority from the Congress in fiscal year 2015 so important?

Admiral SYRING. Very important for us to get the production quantities up. You and I have discussed that we, ideally, want to be at 52 interceptors per year from a manufacturing standpoint. Obviously, our request this year is less than that. But I would just urge the committee to look at our fiscal year 2013 and 2014 budget requests, and the timing of those contract announcements, in total. In terms of in the last few months we have put 33, plus up to 50, interceptors under contract in the last 6 months or so.

So 83 or 84 interceptors. These 30 will be added to that by the end of the year. So in a period of 15 months we will have put under contract over 100 interceptors. And as you know, sir, that was

paced by some of the technical development problems that we had with the divert system. And we are past that, and confident that we are in a stable baseline, and ready for a multiyear.

Mr. FRANKS. Thank you, General.

Thank you, Mr. Chairman.

Mr. ROGERS. I thank the gentleman.

The gentleman from California, Mr. Garamendi, is recognized for 5 minutes.

Mr. GARAMENDI. Thank you. I would like to go back to the directed energy; a significant reduction year to year, down to 14. I personally have thought this would be something that we should be spending substantially more money on and we ought to be advancing it for reasons that we have discussed and probably ought not go into in great detail here.

But I am looking at this, and wondering if we were to move $10 million from another part of your account to directed energy—for example, delay the purchase of a missile for a month, 2 months—and put in directed energy, what would that mean to that missile program if we were to switch around and add another $10 million or, let's say, $15 million to the $14 million that is there.

Admiral SYRING. Every——

Mr. GARAMENDI. So which program would you like to cut by $15 million?

Admiral SYRING. Sir, as you know, every interceptor, as I told Mr. Franks, is important to the warfighter, at this point. We are trying to get our interceptor quantities up for both that and SM–3 at rates that we are not yet to.

Mr. GARAMENDI. Okay, so we don't go to interceptors. Where would you like to take $15 million?

Admiral SYRING. Can I take that for the record?

Mr. GARAMENDI. No.

Admiral SYRING. If I can, sir, just answer the—I will answer the question directly, in terms of there is a pace to technology maturation here on both of the concepts that we are pursuing. And throwing—I don't want to say "throwing"—adding more money could help a little, but not a lot. And as long as we stay on track to demonstrate this by the end of 2015—and I gotta tell you, sir, both concepts are promising for different reasons—as long as you hold me to that, and I make the goal of where I said I was going to be by the end of 2015, I think we are on the right track here.

The scaling and packaging is the next big hurdle that we are looking at in parallel.

Mr. GARAMENDI. So there is no program—so every other program is more important than—a few moments ago you said you could and would put more money into it if you could—had that money available. So every other program is more important than this one, than adding money to this one.

Admiral SYRING. The pace at which we are moving, and the—where we are with the experiments and the tests that are going on, are driven more by the technology than money at this point.

Mr. GARAMENDI. Okay. You and I are going round and round, and we are not going to get to a conclusion. But the information I have is that another $10 million to $15 million would substantially advance this program.

General MANN. Congressman, if I——

Mr. GARAMENDI. General, it looks like you want to jump into this.

General MANN. Well, I would just like to add, as you know the Army is also involved in directed-energy technologies. And we have already successfully tested a 10-kilowatt system back in December, currently about to do another joint test of that 10-kilowatt system in May down in Florida. In addition, we are looking at taking that technology, which right now has a range of a little bit more than 5 miles—and it is really primarily focused against cruise missiles, UAVs, counter rockets, artillery mortars, and whatnot.

We are looking at taking that technology and, hopefully, being able to mature it, as Admiral Syring is talking about, to a 50-kilowatt capability that will give us extended range. So——

Mr. GARAMENDI. Is that—please continue.

General MANN. So I just wanted to add that in addition to what the Missile Defense Agency is working on we also, internal to the Army, are also looking at that because of the nature of the threat out there; cruise missiles, UAVs and the RAM [rocket, artillery, and mortar] threat that is out there.

Mr. GARAMENDI. Is your technology different than the two technologies that Missile Defense is pursuing?

General MANN. It is solid state, it is directed. His is a little bit looking at a higher level, looking at a different threat set than what we are looking at. We are really looking at a lower-level threat set.

Mr. GARAMENDI. I think there is—we have three different technologies, then. Raising the question of three different technologies because the Army wants to do it different than Missile Defense, or is it something different in the technology, some reason why we have—why we are pursuing three different technologies?

General MANN. I would say, and I will defer to Admiral Syring, I think that the premise of the technology as far as being directed energy is pretty much the same. But we are looking at different threat sets. And taking out an air-breathing threat, or taking out a ballistic missile is a lot different than taking out a mortar.

Mr. GARAMENDI. I understand that, but that is not where my question is going. I am out of time, but I want to find out why we have three different technologies and whether we might want to choose one or the other—or one of them, and move forward with that at some point in the near future.

I will let it go at that. I am past time. Thank you, Mr. Chairman.

Mr. ROGERS. I thank the gentleman.

Go now to the gentleman from Colorado, Mr. Lamborn, for his 5 minutes of questions.

Mr. LAMBORN. Thank you, Mr. Chairman. And Admiral Syring or General Mann, how important is it that we keep moving forward on an East Coast site to stem the threat of an Iranian attack?

General MANN. I will go ahead and start, because Admiral Syring has been getting a lot of love in here up front here. So——

[Laughter.]

Mr. LAMBORN. That is true. We love him.

General MANN. You know, obviously, by having an East Coast site it does provide dispersal of our systems, rather than just being

a Greeley or at Vandenberg Air Force Base, having a third site will basically disperse the arsenal, number one. Number two, because of the location of the East site it gives us more battle space or more decisionmaking time for threats emanating out of the Middle East. So from that standpoint, that is also additive.

And third, it is more—pardon the vernacular—more arrows in the quiver. We have more capability, not necessary—or, excuse me, more capacity, not more technological capability. And so as a result, we have more of an ability to address a raid-size threat that might be used against the U.S.

Mr. LAMBORN. With that in mind, from the operational perspective that you just gave us, should we be doing more from a planning and budget perspective? I mean, the administration is going along with what Congress has directed it to do, but no further. Should we, and could we, be doing more?

General MANN. We could always do more. I think if you are looking for my recommendations, Congressman, I would say that dealing pragmatically with the budget the way it is, I think that the best investment for the taxpayer is to increase our sensor capability and discrimination. That, right there—and increasing the reliability of EKVs. That is where, if you were asking for my recommendation, that is where I would put the next dollar.

Mr. LAMBORN. Admiral, do you or, Ms. Bunn, do you have anything to add to that?

Admiral SYRING. The warfighting advantage was well-explained by General Mann. We, obviously, agree with that entirely. In terms of are we doing enough, the work that we started with the four—the downselect of the four sites, and all of the EIS [environmental impact statement] work that is going to go on over the next 2 years, is setting the stage for a decision if the Department were to make that decision. And that has got to play out.

We are aggressively—we are on an aggressive EIS timeline, if you compare it to history. And there is a lot of work that has to go on in terms of site surveys, all of the town halls, everything that will go on in parallel. I think you will see the combatant commanders debate this requirement and debate the need. And I think General Jacoby and Admiral Haney will be in a good position to address that next year.

I think that we are—I think, as General Jacoby testified, we are setting ourselves up in time for a decision. And you have heard me talk about the need to think near-term, mid-term, and far-term. And I have always characterized the mid-term as the 2020 timeframe.

Mr. LAMBORN. Okay.

Ms. Bunn.

Ms. BUNN. I think it has been well-addressed, and I would agree with——

Mr. LAMBORN. Then let me ask you a question. Are we doing enough against potential Chinese threats, including cruise missiles or submarine-borne ballistic missiles?

Ms. BUNN. As far as defense of the homeland, our homeland defense is geared toward states such as North Korea and Iran. With regard to regional missile defense, China does have a number of

short- and medium-range ballistic missiles. And that is part of why we are going forward in the Asia-Pacific.

Mr. LAMBORN. Well, and I didn't mean, you know, hundreds of missiles. I meant a rogue missile or an unauthorized or accidental launch is what I was referring to.

Ms. BUNN. Yes, sir. We haven't designed against missiles from Russia or China. But if there were an accidental or unauthorized launch, we would do what we could to defend against it.

Mr. LAMBORN. All right.

Thank you, Mr. Chairman. I yield back.

Mr. ROGERS. I thank the gentleman.

The chair now recognizes the gentleman from Georgia, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman, and thank you all for being here. I would ask each of you to respond to this question. Has the improved missile defense of ballistic missile systems made cruise missiles more attractive to our adversaries? And if you could also just give your—give us your current assessment of the cruise missile threat.

General MANN. Thank you, Congressman. I think it is fair to say that cruise missile technology is being looked at by a number of nations. Nine right now are currently producing this capability. I think 20 more are looking into this kind of technology. So I think it is fair to say that cruise missile technology is something that many nations are looking at. And, as a result, you know, we also are looking at our defenses against that.

Right here in the National Capital Region [NCR], as you know, we are about to put the joint attack cruise missile defense elevated sensor, that Aerostat [Tethered Aerostat Radar System] there at APG, at Aberdeen Proving Ground, to do a test on behalf of NORTHCOM [U.S. Northern Command] to look at how do we do a better job of sensing an incoming cruising missile and being able to defeat it, utilizing some of the systems that we have around this area like the NASAMS [National Advanced Surface-to-Air Missile System] missile, for instance.

So that is one of the things that we are looking at right now, at how do we bolster up, in terms of the NCR, our ability to address that threat. I talked earlier about high-energy laser technologies. And that is something that the Army is also looking at in terms of countering the cruise missile threat that might be out there. So this is definitely an area that many countries are looking into.

Admiral SYRING. I would just add to the general's point that I—from a ballistic missile standpoint, which is my job, I don't see any of that threat deescalating in favor of cruise missile threat. I see these both increasing at a very rapid pace.

Ms. BUNN. I would agree that we don't want ballistic missiles to be a free ride for a potential adversary, nor cruise missiles either.

Mr. JOHNSON. Thank you. Also, understanding that you are performing environmental impact statements for four potential sites, what is the rough-order estimated cost of the East Coast missile defense site?

Admiral SYRING. The estimate that we have gone on record is in the rough order of $3 billion to $4 billion, which would include the site and 20 interceptors. Now, that will be refined as we study, in

more detail, the four sites that we are looking at. And that cost estimate will be submitted as part of the contingency plan updates that we provide the Congress over the next 2 years.

Mr. JOHNSON. I want to ask all of you this question. Is one successful flight intercept sufficient to give us sufficient confidence to invest additional billions of dollars in deploying and procuring 14 additional GBIs?

Admiral SYRING. Let me take that, and then General Mann, from a deployment standpoint, can address the warfighter confidence with deployment. As the chairman has said, as the ranking member has said, the last three flight tests are—we are 0-for-3 in terms of intercept tests.

Mr. JOHNSON. They were what?

Admiral SYRING. Zero-for-three in the last three intercept tests that were conducted. The history of this program is that in intercept tests in the GM program it is actually 8 for 16; 15 if you count it somewhat different. The CE–I, and I won't throw too much configuration jargon here, but the oldest version that was deployed first was actually 3-for-3 before the last failure in July. So 3-for-4 of that version.

What we are talking about in terms of that is one of the three past failures, there were two failures in a row of the new one, of the new configuration. One failed because of the lock wire missing, and one failed because of excessive vibration in the inertial measurement unit. Both very mechanical in nature. The first one, obviously, quality in nature. So your point is, if we go and test again this summer what does that mean in terms of our confidence to continue production and deployment of the missile.

And I will let General Mann ask the—answer the deployment question. But if you think about sort of the new version, with the corrections, was flown back in January of 2013 very successfully. It was a non-intercept flight, but we put it in space and put it through its paces. This will be the intercept test, this summer, of that configuration.

And in this year's budget request there are three more intercept tests scheduled for 2015, 2016, and 2017, of the latest configuration. And I would say all of those will be the benchmarks of confidence for the warfighter to deploy the system.

General MANN. Congressman, I agree with General Jacoby's assessment. We have confidence in the current capability. Do we need to do more? Do we need to continue to do the necessary testing? Yes. But we have confidence in the operational employment, the rules of engagement that we would use that would address maybe some reliability or some uncertainty associated with the system.

I think what is key is that, as Admiral Syring was talking about, is that we sustain a make-sense test program, from year to year, we maintain that. Make sure that has the predictability that it needs. That we continue ongoing efforts to redesign or to upgrade the current EKV, as well as looking at leap-ahead technologies. So don't know if that answers your question.

But I think that the way ahead is pretty well stated. We will see what happens with this test coming up. And also, as Admiral

Syring stated, before last summer's CE–I failure they had three successful intercepts right before that.

Mr. ROGERS. The gentleman's time is expired.

The chair now recognizes the gentleman from Ohio, Mr. Turner, for 5 minutes.

Mr. TURNER. Thank you, Mr. Chairman. Just one quick comment in defense of our chairman. I believe our chairman cited the Washington Post's March 2nd editorial that had the heading "President Obama's Foreign Policy is Based on Fantasy." And I just want to underscore the fact that the Washington Post is certainly not up for reelection, and they certainly are not seen as being partisan against the President.

So considering that they are—that their comments are consistent with our chairman, I believe that it is certainly important for him to raise the issues as to how the policy of the administration affects the issues that are within the jurisdiction of this subcommittee. I would like to ask, if the chairman has not, that that editorial be entered into the record of this hearing.

Mr. ROGERS. Without objection.

[The information referred to can be found in the Appendix on page 96.]

Mr. TURNER. Ms. Bunn, we had a chart that was up that said that this is the budget request for missile defense represents the smallest missile defense budget request since Bill Clinton was President. I was reading your bio. It struck me, and it seems, and I hope I am not mistaking this. But I was reading all the different positions that you have. It seems that your position, which now includes missile defense policy, that the last time that you had a title that also included the words "missile defense policy" was the Clinton administration. Is that correct?

Ms. BUNN. Yes, sir. That was the last time. The first time was in the Reagan administration, and then the George H.W. Bush administration.

Mr. TURNER. Well, sometimes things repeat themselves. What disturbed me about that was, when I read the conclusion to your statement, it says, "The ballistic missile threat to the United States or our allies and partners, and to our forces overseas, is evolving. And we continue to grow and adapt our homeland and regional missile defense posture and international cooperation to address it."

Now, from my perspective in looking at that chart, and where we have been and where we are going, I mean, we were going to be at a position where the Alaska missile field was complete and there were going to be GBIs, ground-based, forward deployed in Europe. This administration cut completing the Alaska field, and then cut the forward base missiles that was to be the third site. Do we have any request for the implementation of what had been the phase four of the Phased Adaptive Approach by the administration?

Ms. BUNN. Sir, when I said—talked about the growth, I was referring to the additional 14 interceptors that we have decided to deploy.

Mr. TURNER. To where?

Ms. BUNN. For the—for homeland defense.

Mr. TURNER. Where are they deployed?

Ms. BUNN. They will be deployed in Alaska.

Mr. TURNER. But those are the ones that were already scheduled. So you can't say you are growing something, when you have cut it and then you decide to put back a portion, but not all, of what you cut. So my question to you was, is there any budgetary request that includes funding of any portion of the implementation of what was phase four, the Phased Adaptive Approach?

Ms. BUNN. No, sir——

Mr. TURNER. No, there is not.

Ms. BUNN. The replace——

Mr. TURNER. So we don't grow, we actually only have a replacement of missiles that the Bush administration had proposed, correct? You can turn your mic back on. I am not finished.

Ms. BUNN. Sir, they had originally wanted 14 more. A decision was made to go toward defending Europe against Iranian threats. And so that was—funding was——

Mr. TURNER. So the answer is just yes, right? I mean, just——

Ms. BUNN. The answer is yes.

Mr. TURNER. Right, right. So you haven't grown it. You first cut the missiles in Alaska, then you cut the forward deployed missiles, then you are going back and putting some more in Alaska. And that is still not a net growth. We are still behind. You say we cannot afford to stand still. We are not, we are moving backwards.

I appreciate the analysis that we had on the third—what the—excuse me, the East Coast missile defense, gets us. And there are terms that people banter around on validated military requirement. And I wanted you to help us on that. Because it seems to me there are only three ways to criticize this. That there is no threat, we don't need it yet, and money. And I think we can resolve all those.

But then they throw in this validated military requirement. Admiral Syring, could you please describe what validated military requirement is, and tell us how does that relate to any MDA system for the Phased Adaptive Approach for SM–3 to an interceptor, any?

Admiral SYRING. Yes, sir. As you know, MDA is not under the JCIDS [Joint Capabilities Integration Development System] process and the joint staff requirements process. When I talk about a validated requirement in missile defense terms, I am think—I am talking about a requirement that is on the STRATCOM [U.S. Strategic Command] priority capability list or the NORTHCOM integrated priority list. And if there is a requirement that is in there that talks to, for example, the East Coast missile site that, to me, is a requirement.

And we can go back to those lists and we can trace things that we are building, systems that we are providing, to those requirements in the capabilities list.

Mr. TURNER. Well, Mr. Chairman, I appreciate that our debate continues to be on the issue of threat and timing and money. Because I think anybody who has had any of the classified briefings on this know that the threat is there, the timing is now, and the dollars need to be placed there by this Congress. Thank you.

Mr. ROGERS. I thank the gentleman. And just for the record, I know I have had this conversation with both General Mann and Admiral Syring in private, but I very much support directed energy

and I support what Mr. Garamendi was talking about a little while ago. And if, in fact, it is just a matter of y'all needing some more money, I hope you will let us know. Because we may not be able to get you to find it, but we will figure out a way to find it. Because I think that is the future, and I would like to see us be aggressive in pursuing that technology.

Oh, Mr. Brooks. He came back. I am sorry. The chair now recognizes Mr. Brooks for any questions he may have.

Mr. BROOKS. Thank you, Mr. Chairman.

Admiral Syring, on virtually all major missile defense and strategic missile programs, such as PAC–3, Aegis, THAAD, and Minuteman, testing is typically conducted multiple times a year to ensure ongoing reliability and operational readiness. However, since the inception of the Ground-based Midcourse Defense program, testing occurs sometimes less than once a year. And, unfortunately, testing seems to be driven more from problems that arise instead of catching issues that could be caught long before they arise if a more robust testing program was in place.

Do you agree that the more testing we do on a more frequent basis would help the GMD system?

Admiral SYRING. Yes, sir.

Mr. BROOKS. Why?

Admiral SYRING. Testing is the ultimate graduation exercise to the systems that we are fielding. And ground-based testing is necessary, but not sufficient. Ideally, sir, you are absolutely right. That we want to be, you know, out in front and testing the new capabilities, new reliability improvements that are added to graduate them to the fleet. And that is where we want to be on an annual basis, at a minimum.

Mr. BROOKS. Well, what is holding us back from conducting a more robust testing program?

Admiral SYRING. Technical issues on the new interceptors was the biggest reason for the delay. And you know when I came in as the director my priority was to go back and get a CE–I interceptor flight-tested as soon as possible, and we did that.

Mr. BROOKS. Is funding an issue with respect to those technical issues?

Admiral SYRING. Funding is always an issue, and we are always prioritized. But I can assure you that we didn't go any slower because of funding to resolve the technical issues.

Mr. BROOKS. All right, thank you.

General Mann, please switch hats for a moment to your hat as commander of space—excuse me, Army Space and Missile Defense Command. Why is the Conventional Prompt Global Strike capability important?

General MANN. Congressman, that capability provides us the ability to strike anywhere in the world in under an hour. And don't necessarily need to have a forward-deployed element that is out there to be able to do that. It also allows us to address time-sensitive targets or targets that are fleeting. I would say it also provides a capability if we were to enter anti-access or area-denial environment, where the lodgment or the forward operating bases may be contested. So it does provide a capability to be able to address some of those issues.

Mr. BROOKS. I have been informed the Navy is evaluating the basing of such capabilities on submarines. Do you support that view?

General MANN. Congressman, I know that, you know, the Navy is looking at this technology. What I can tell you is, my command, as you know, very, very proud of the efforts of the folks there in Redstone as well as Sandia Labs on our successful test that took place back in November 2011. And we are encouraged, we are on track to execute the August test.

And then from there, you know, we will take direction from OSD [Office of the Secretary of Defense] as to where they want to go. I do know that the Navy is looking at this. They are looking at it in terms of the size configurations and how it could possibly be placed on different platforms.

Mr. BROOKS. And this is a question for any of you. How much does America spend on Ground-based Midcourse Defense?

Admiral SYRING. We have spent—and, Mr. Chairman, if I can just check this for the record—$24 billion to date, $30 billion by 2019.

[The information referred to can be found in the Appendix on page 101.]

Mr. BROOKS. How about in the last fiscal year how much was spent? Do you know offhand?

Admiral SYRING. In fiscal year 2014 it was roughly a billion dollars. With all of the homeland defense improvements in this year budget we are at $1.3 billion.

Mr. BROOKS. The reason I mention that is that there was some discourse about BRAC [Base Closure and Realignment]. And certainly, to the extent BRAC can be more efficient, that is something Congress ought to consider. But at the same time, it seems like that is a drop in the bucket when you look at $750 billion a year that this government is spending on means-tested welfare or wealth transfer programs.

And I would submit that is a place that perhaps we need to be looking at in order to help prevent the degradation of our national security capabilities. Or perhaps look at the $40 billion to $50 billion a year we spend giving away to foreign entities money, again, that we have to borrow that we can't pay back to give it away. And so as we are looking at BRAC, I would hope that the members of this committee and the Members of Congress generally would also look at all these much more glaring expenses that, at least to me, are a lesser priority than funding our national security.

Thank you, Mr. Chairman.

Mr. ROGERS. I thank the gentleman. And I am impressed, Admiral Syring, that you remember those numbers, those spending numbers. That was pretty good.

I only have one question left, and that is for Ms. Bunn. As you know, this committee, in its report to accompany the fiscal year 2014 NDAA [National Defense Authorization Act] directed DOD and the Department of State to provide the full report on its dealings with Russia on the U.S. missile defenses. We have a responsibility to our constituents to understand what has been proposed. Especially when we understand, as was just confirmed, that the

Obama appointees had sought to provide Russia classified information on our missile defenses.

I understand that the Department of Defense is offering to brief us, and that may be sufficient. But I see nothing about the State Department responding. Why is that?

Ms. BUNN. Congressman, when—in December, when the Under Secretary for Policy came to brief Chairman McKeon and others, there was a State Department representative with him. He briefed them on the MDA presentations that had been used with Russia. We have now compiled others. As you know, you have gotten a recent letter saying perfectly willing to come and brief on those, as well.

I suspect that State will be with us. And otherwise, you would have to ask the State Department.

Mr. ROGERS. Okay, thank you.

The chair now recognizes the ranking member for any questions he may have.

Mr. COOPER. Thank you, Mr. Chairman. I would be happy to yield to my friend from Texas, who has been here waiting at the hearing for some time, if Mr. Veasey would like to use my time.

Mr. VEASEY. Is this the appropriate time to ask about the missile defense? That is what I wanted to talk about. Okay, yes.

I wanted to ask you about requests for missile defense funding. How did that fare in the fiscal year 2015 budget request?

Admiral SYRING. We were successful in the Department requesting 7—just under $7.5 billion.

Mr. VEASEY. Okay. Were your requests prioritized?

Admiral SYRING. Yes, sir.

Mr. VEASEY. They were. Okay.

Admiral SYRING. And I would just add, very strongly supported by the Department.

Mr. VEASEY. Okay, good. Good. Do we—and I wanted to also ask—and I think that either one of you can answer this particular question about the left-of-launch. And I wanted to know, do we have sufficient intelligence to inform left-of-launch options?

General MANN. I think that is an area that I think all the combatant commanders would agree is an area that we need to continue to improve our capabilities for left-of-launch. You know, obviously this is a policy issue. But in terms of the ISR [intelligence, surveillance, and reconnaissance], improving our ISR abilities to be able to see where threat systems are at or located on the battlefield, I would say this is an area, obviously, that we can always do better.

Admiral SYRING. I can just add, I think you heard, for the record, from General Jacoby that he would—that that is at the top of his priority list is increased indications and warning capability.

Ms. BUNN. And I would add that we need a mix of capabilities to deal with adversary ballistic missiles. Part of that has to do with missile defense, and part of that has to do with other capabilities for strike. And the intelligence ability, the ability to find and fix those, is one that we—is very important.

Mr. VEASEY. Thank you.

Mr. ROGERS. The gentleman from Arizona, Mr. Franks, is recognized.

Mr. FRANKS. Well, thank you, Mr. Chairman. It has been an interesting discussion here. And Admiral Syring, I assure you the last thing I want to do is to keep hammering on you or put you in an awkward position in any way. But we have, I think, what is it, about 30-plus Aegis-capable ships and a test site in Hawaii. And we have Ashore sites coming online in Romania and Poland, I think it is. They are on time in 2015–2018, both of those?

Admiral SYRING. Correct, sir.

Mr. FRANKS. And with all of these avenues to defend from, the fact remains that we have cut more than 90 SM–3 IBs out of the FYDP [Future Years Defense Program], and more than 20 in this year's budget alone. And I—you know, I want you to know I understand that this is a challenge that has been forced upon you. But in the ways that you—in the way that you feel that you can, can you give us any guidance to this committee as to why these cuts should take place?

And can we work together to try to maybe right this ship if we are under—giving less rounds than we may need, at some point, to justify—not only justify, but to populate these new avenues of these sites that are coming online?

Admiral SYRING. Thank you, Mr. Franks. As you know—and I will talk to the total quantity here in just a second—as you know, we also requested advanced procurement in this year's budget, which will set the stage for the multiyear procurement request in 2016 through 2019. And the goal—negotiation goal, objective—is to get as close to 52 per year through the multiyear procurement savings, which have to be at least 10 percent, and we are hoping to be more like 15 to 20 percent to get the quantities back up towards 52.

And, sir, it was a balance of risk this year. And I explained this; we were late to award the 13 quantity, we just awarded the 14 quantity. The 15 quantity will be added on. If you look at those three together it is 115 missiles in a period of 15 months. And given the other priorities in the budget, sir, that was a choice that was made to get the homeland defense initiative started.

Mr. FRANKS. I don't question your choice at all. It does underscore the need to try to head off the sequester in 2016. Let me—let my final question be to all of you here. Just one general comment. What do you believe you need most from us now? What is the most important thing that we can do to empower you to do the jobs that you are so capably already doing?

General MANN. Address sequestration. Obviously, predictability in terms of funding. And as Admiral Syring has articulated, as far as priority the best use of taxpayer dollars, I would say the support for long-range discrimination as well as to maintain confidence in our GBIs that we have up there, as well as leap-ahead technologies.

Mr. FRANKS. That is a really good answer. Okay.

Admiral SYRING. I am comforted by your support, by the committee's support, with our sensoring and discrimination effort that needed to get started to make the best use of the interceptors we have, sir, as we have discussed. And I just ask for that continued support. The second part is advanced technology and support to

continue to accelerate those efforts, some of which we can't talk about here.

But I agree with you entirely in terms of we can't just keep building bigger and bigger missiles. At some point we have got to bring that technology along. And it has got to be disruptive.

Mr. FRANKS. Ms. Bunn.

Ms. BUNN. Instead of talking to hear myself talk, Congressman, I will just say amen and amen.

Mr. FRANKS. That is a good answer.

Thank you.

Mr. ROGERS. Thank you.

The chair now recognizes Mr. Langevin for any questions he may have.

Mr. LANGEVIN. Thank you, Mr. Chairman. And I want to thank our panel for being here today. And I apologize I was not here earlier. That is the downside of this job, you have to be in five places at the same time all at the same time. But thank you for your testimony. And I know that was a pretty robust discussion on directed energy so I won't delve back into that area.

But I would like to ask a question with respect to acquisitions and procurement. So in May 2013 GAO had concluded that despite some progress, and I quote: "MDA has undertaken and continues to undertake highly concurrent acquisitions. While some concurrency is understandable, committing to product development before requirements are understood and technologies are mature, or committing to production and fielding for development is complete, is a high-risk strategy that often results in performance shortfalls, unexpected cost increases, schedule delays and test problems. It can also create pressure to keep producing to avoid work stoppages," end quote.

So previous EKV development and deployment have been rushed, with deployment preceding operationally realistic testing. How will MDA reduce acquisition risk for the development of the new common kill vehicle [CKV]?

Admiral SYRING. First, Congressman, good to see you, sir. We agree with the GAO's assertion on concurrency. And we have taken action to rectify that within the Missile Defense Agency, where every program today is required to address concurrency in the execution briefs that I receive quarterly. In terms of what areas of concurrency do you have, how are you managing them, what risks do you have and what are you going to do to decouple efforts, if required.

You can't ever manage in a zero concurrent nature in a program that is unaffordable and will never deliver. It is a matter of managing that concurrency and understanding it. Specifically to your question on the EKV–CKV, I can assure you—I have told people this—we have one chance to get it right. And circumventing the system engineering, design cycle, prototype testing, and qualification will not happen. There is a very rigorous process that is followed for properly engineered missile systems.

I have got a lot of experience with the Aegis development and the Standard Missile, in particular, that history of following that process. And I assure you that it will be followed in the EKV development.

Mr. LANGEVIN. Thank you, Admiral, I appreciate those assurances. I know the committee's going to want to continue to follow this closely. So thank you for your work in that.

I will ask one question, I think, that hasn't been asked on directed energy in this respect to requiring collaboration with partners. Are there opportunities for collaboration with partner nations in directed-energy research? And if so, can you outline what those are, both current and future?

Admiral SYRING. Currently, none. There are opportunities which, as we flush those out over the next few months to a year, we will get back to you on. But there are several opportunities abroad that we are thinking through.

Mr. LANGEVIN. Okay, very good. Thank you all for the work you are doing. I am going to stop there. I will yield back the balance of my time, and I appreciate you all being here today.

Thank you, Mr. Chairman.

Mr. ROGERS. I thank the gentleman.

Chair now recognizes the gentleman from Huntsville, Alabama, Mr. Brooks, for any additional questions he may have.

Mr. BROOKS. Thank you, Mr. Chairman.

Ms. Bunn, do you know why Dr. Miller, the previous Under Secretary of Defense for Policy, sought approval to release MDA's velocity at burnout information to Russia?

Ms. BUNN. Sir, what Dr. Miller asked for was an assessment of the risk of doing so. They provided that—MDA provided that analysis, and it was not released.

Mr. BROOKS. Why did he seek that assessment?

Ms. BUNN. It was part of the efforts that have gone for several administrations to convince the Russians that our missile defense capabilities in Europe don't pose a threat to their strategic deterrent. The talks, where we keep saying we are not going to accept limits, the Russians keep seeking limits. We were looking for other ways to address this without seeking limits. So that was the reason.

Mr. BROOKS. Do you support such a release of MDA's velocity at burnout information to Russia or any other potential foe of the United States of America?

Ms. BUNN. Given the risk assessment that MDA did, I would not.

Mr. BROOKS. And Admiral Syring, did you approve a release of the velocity at burnout data at any point in time?

Admiral SYRING. No, sir.

Mr. BROOKS. And was that a part of the assessment that Ms. Bunn has just finished testifying to?

Admiral SYRING. Yes, sir.

Mr. BROOKS. And why would a foe of the United States of America find that velocity at burnout information of value?

Admiral SYRING. Let me try to answer that unclassified. And if I need to go classified, I would ask that I come see you about that. It gets to methods and means of employment that could be derived from such equations.

Mr. BROOKS. And this would be a question for any of the three of you that wish to answer. Do you have a judgment as to whether the release of velocity at burnout information, in any way, shape

or form, has the potential to undermine America's national security capabilities, in particular with respect to missile defense?

Admiral SYRING. In my view, yes, and the uncertainty of where that information would go. And, my firm recommendation not to release it.

Mr. BROOKS. General Mann, do you have an opinion?

General MANN. I agree.

Mr. BROOKS. And Ms. Bunn?

Ms. BUNN. As I said, given the risk assessment that MDA produced, I would not favor releasing that.

Mr. BROOKS. All right, thank you.

Ms. BUNN. Same——

Mr. BROOKS. Mr. Chairman, I yield back.

Mr. ROGERS. I thank the gentleman.

The chair now recognizes the gentleman from California, Mr. Garamendi, for a second round of questions if he has any.

Mr. GARAMENDI. Thank you, Mr. Chairman.

You are going to be doing another test firing, Admiral. If it doesn't work, what is plan B?

Admiral SYRING. If it doesn't work, it could fail for many different reasons. And we will go through that as we do with every failure. An analysis of what failed and why it failed.

Mr. GARAMENDI. So plan B is to continue to pursue the current technology.

Admiral SYRING. The success or failure of this test this summer, as I have talked to you, sir, about is in no way going to change my decision or recommendation to pursue the redesigned EKV.

Mr. GARAMENDI. Okay. There was a question raised earlier about this new missile defense site somewhere on the East Coast. And I thought I heard one, or maybe two of you—Ms. Bunn and maybe Admiral—or General, I am not sure which of the three of you, say that the current array of missiles provide adequate protection from the present and known threats from Iran and North Korea. Is that correct?

General MANN. Yes, Congressman. It does provide a limited defense against threats emanating from North Korea and Iran.

Mr. GARAMENDI. Now you used a qualifying word there, so let's go at that word "limited." What do you mean by that?

General MANN. Excuse me. Given their current capability, it does provide the protection. But we all know that these countries are continuing to increase their arsenal and their technology. And down the road, they might reach a point in terms of numbers, just the numbers of missiles that they could employ that it could overwhelm the system.

Mr. GARAMENDI. Okay.

General MANN. Down the road.

Mr. GARAMENDI. So now the solution there might be to increase the number of missiles in Vandenberg and Alaska? Or to have a new missile defense site?

General MANN. Or it could be to also continue to increase the reliability and the effectiveness of the current fleet, too. And that would also have an operational employment aspect to it. And that is the reason why we support the Missile Defense Agency's current

approach in terms of increasing the effectiveness and the efficiency of the current systems, as well as looking ahead.

Mr. GARAMENDI. So there are multiple ways of going at this problem of increased capability by Iran and North Korea and, I suppose, somebody else out there that might come along. And that might be to make a better kill system. One that is more accurate, more agile. And increase the number of missiles at the present site. It seems to me the system that you have set up—correct me if I am wrong, now—is one in which you want to first make sure you know what is going on.

And this is the increased capacity of the radar systems. That that is the high priority. Get that done so you know what is coming in. Secondly, develop a missile that actually will work, that has multiple capabilities. And then make a decision about adding to the existing number of missiles and, possibly, an additional missile site. Is that the track you are on?

General MANN. I would add to that, Congressman. I would add to that. I think also it gets back to—and I think some of the—I think General Jacoby also highlighted the importance of making sure, in terms of indications and warning, that we continue to work on our ability to locate threat systems. I think that is really the first step. To make sure that, number one, we are able to identify those threat platforms that are out there.

And, in addition to increasing our sensor, our ability to discriminate, to be able to find the target within a threat complex. And then to be able to utilize the GBIs now, and in the future, in the most efficient means possible.

Mr. GARAMENDI. And that is the track that is in the current budget.

Admiral SYRING. Yes, sir.

Mr. GARAMENDI. With the exception of directed energy.

Admiral SYRING. There are aspects of directed energy that we need to spend some time with in a classified forum so I can complete—give you the complete picture.

Mr. GARAMENDI. I will yield back my time. Thank you.

Mr. ROGERS. I thank the gentleman.

The chair now recognizes the ranking member for any questions he may have.

Mr. COOPER. I thank the chair. I just wanted to thank the witnesses not only for their testimony, but for their hard work every day in defending America. I think the most important single word that was uttered in this hearing was uttered by General Mann in response to, I think, Mr. Franks' question of what we could do to help you do your work better.

And basically, you said sequestration. Get rid of sequestration. So I hope the committee heard that testimony, and I hope this committee will act to eliminate sequestration.

Thank you, Mr. Chairman.

Mr. ROGERS. I thank the gentleman.

Any other questions from any members? Okay, I hear none. And I completely echo the ranking member's statement. I have made it clear to the chairman of the full committee and to our House leadership that it is my number one priority to see sequestration, defense sequestration in particular, rolled back and eliminated. I

think it is going to do great damage to this country. So, hopefully, we will be successful. But I can assure you it is a top priority of mine over the next year so—while we navigate these waters.

But thank you all again for your time and your expertise and your service to our country. And with that, we are adjourned.

[Whereupon, at 4:51 p.m., the subcommittee was adjourned.]

A P P E N D I X

MARCH 25, 2014

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 25, 2014

Statement of Hon. Mike Rogers, Chairman
Subcommittee on Strategic Forces

HEARING ON

Fiscal Year 2015 National Defense Authorization Budget Request for Missile Defense Programs

March 25, 2014

Good afternoon. I welcome everyone to today's hearing on the Fiscal Year 2015 National Defense Authorization Budget Request for Missile Defense. We have a great team of witnesses today for this important topic:

- Lt. Gen. David Mann, U.S. Army, Commander, Joint Functional Component Command for Integrated Missile Defense, United States Strategic Command,;
- Vice Admiral James D. Syring, U.S. Navy, Director, Missile Defense Agency
- Ms. M. Elaine Bunn, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy.

This is a great panel for this discussion today and I welcome you all here.

As many know, my usual custom is to stop here and pass on the prerogative to make an opening statement. I usually prefer to get right to the witnesses so we can hear their statements and get to questions.

But not today. I believe that today I have to state my concerns about the threats to the U.S. and its allies that our Administration has seen fit to virtually ignore. The Washington Post has referred to the Administration's policy as "Fantasyland" and Mr. Fred Hiatt said yesterday that, "As the United States retrenched, the world became more dangerous."

So, as Chairman, I use my prerogative today because missile defense has been at the center of this Administration's catastrophic failure known as the Reset with Russia, the full effects of which will be with us for at least a generation.

When this President was elected, he promised a reset with Russia, suggesting that the previous Administration was to blame for a negative relationship with Russia, as well as the rising of the seas and various other strawmen.

To support that reset, he slashed our missile defenses, which Russia has never liked. He didn't trade them to Russia; the President gave them away for nothing.

This isn't just the Third Site which everyone – including our allies – found out about in the middle of a September night in 2009.

He also cancelled our Multiple Kill Vehicle program, the Kinetic Energy Interceptor, the Airborne Laser and other programs.

He didn't test the mainstay of the GMD fleet for five years.

He slashed the missile defense budget from a projected $9.4 billion to $7.8 billion in one year.

Prior to ever proposing the Sequester, the President cut more than $3.7 billion out of the missile defense agency budget, and then pleads poverty when it comes to the East Coast Site to protect the United States from the Iranian ballistic missile program, which the Intelligence Community has consistently warned could reach maturity in 2015.

If you look at the missile defense budget over time (which you can do on the TV monitors around the room), you realize that the FY 15 budget request proposed by the Administration is actually the lowest since the Clinton Administration's FY 01 budget, which was prior to the U.S. withdrawal from the ABM treaty.

But we have a reset with Russia.

Let's review a piece of this history since 2009:

- In September 2009 we severely weakened our alliance with our allies in Poland and the Czech Republic.

- In 2009 we abandoned any serious effort to NATO expansion, including turning our backs on NATO MAP for Georgia and Ukraine – do we think Vladimir Putin noticed?
- In October 2009, Russia simulated a nuclear attack on Poland in 2009.
- In May of 2010 we signed a New START treaty with Russia where only the United States has to cut its nuclear forces.
- In February 2011, Russia objected to further sanctions on Iran the same month the New START treaty entered into force.
- In February 2012, Russia vetoed a U.N. Security Council Resolution on Syria – it was around this point that the U.N. decided to stop counting the number of dead Syrians, because the number had gotten too large.
- In March 2012, a senior Russian general threatened a pre-emptive strike on Eastern Europe, including America's Article V NATO allies.
- In March 2013, President Obama walks away from Phase IV of the EPAA, which was to deploy a homeland missile defense capability.
- In May 2013, Russia denied its willful violation of the INF treaty for the first time, more than five years, reportedly, after first testing the systems that constitute a material breach of that treaty.
- In June 2013, Russia blocks a UN Security Council Resolution responding to the worsening violence in Syria.
- Also in June 2013, the President, having confronted Russia about its arms control violations, ignored this cheating and announces a major change to U.S. nuclear force planning, including additional reductions with Russia, before a small crowd of Europeans in Berlin.
- In August 2013, Russia gave Edward Snowden amnesty following the greatest act of treason since, perhaps, Benedict Arnold's betrayal at West Point.
- In December 2013, Russia blocked a security council Resolution over Syria.
- In January 2014, the Administration finally briefed NATO on Russia's INF violation, almost six years after the first reported tests.
- In March 2013, as Russian forces march on Ukraine, the President talked of the importance of continued military cooperation with Russia and, of course, more nuclear reductions with Russia (again, ignoring Russia's violations of existing treaties) in his new QDR.

And, of course, today we see the results of this pattern with Russia on the ground in Ukraine. We see increasing signs of Putin-ist interventionism in Estonia, Moldova, and Georgia.

And the President? Where is he?

He's deploying additional U.S. forces to hunt down an African warlord, before he's even sent promised MREs to Ukraine.

One wonders if the little Tabasco sauce bottles in those MREs are too close to "lethal assistance" for the President's policy in Ukraine. After all, Putin might get indigestion when he captures the shipments. We are a far cry from Truman's 1948 airlift.

If you had told me in 2009 that this is where we'd be in 2014, with another two and a half years of what passes for "leadership" ahead of us, I'd have told you not in America.

No American President would ever surrender our responsibility to lead in favor of leading from behind.

We are here today dealing with the President's FY15 missile defense budget request. We have come full circle.

The President will propose the policies he wants. But he can't get them funded unless we let him. For my sake, as Chairman of this subcommittee, I want to make this clear: good luck. Weakness is a choice. I choose Peace through strength.

That is why my colleagues Ted Poe and Joe Heck joined me today in introducing a bicameral resolution with Senator Rubio calling on the President to declare Russia to be in violation of the INF treaty, something we have reportedly known about for years.

We simply cannot allow Vladimir Putin to continue to think he can get away with whatever he wants without consequences, as he is doing today in Ukraine and elsewhere.

To the witnesses, let me be clear, these remarks and my concern do not rest with you.

General/Admiral, your lifetime of service is a credit to your nation and we owe a debt of gratitude to you and your families.

Ms. Bunn, I have reviewed your bio and know that you are here today out of a sense of service to your nation. I thank you.

But the present trajectory is all too reminiscent to me of earlier eras of failed leadership and retrenchment.

My reading of history informs me that each previous era was followed quickly by a devastating and likely avoidable war.

RECORD VERSION

STATEMENT BY

LIEUTENANT GENERAL DAVID L. MANN, USA

COMMANDING GENERAL,
U.S. ARMY SPACE AND MISSILE DEFENSE COMMAND/
ARMY FORCES STRATEGIC COMMAND
AND
JOINT FUNCTIONAL COMPONENT COMMAND FOR
INTEGRATED MISSILE DEFENSE

BEFORE THE

COMMITTEE ON ARMED SERVICES
STRATEGIC FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

SECOND SESSION, 113TH CONGRESS

MARCH 25, 2014

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
HOUSE ARMED SERVICES COMMITTEE

Lieutenant General David L. Mann, USA
Commanding General
U.S. Army Space and Missile Defense Command/
Army Forces Strategic Command
and
Joint Functional Component Command for
Integrated Missile Defense

Mr. Chairman, Ranking Member Cooper, and distinguished Members of the Subcommittee, thank you for your continued support of our Service Members, Civilians, and Families. I appear before you today bringing both a Joint and Army perspective for effective missile defense capabilities. We appreciate this Subcommittee's continued support of the Army, the U.S. Strategic Command, the Department of Defense, and the missile defense community. It is an honor and privilege to testify before this Subcommittee along with these distinguished witnesses who bring missile defense capabilities to our Nation, forward deployed forces, partners, and allies.

I have three main responsibilities. First, as the Commander of the U.S. Army Space and Missile Defense Command (USASMDC), I have Title 10 responsibilities to train, maintain, and equip space and global ballistic missile defense forces for the Army. Second, as the Commander, Army Forces Strategic Command (ARSTRAT), I am the Army Service Component Commander (ASCC) to the U.S. Strategic Command (USSTRATCOM). I am responsible for planning, integrating, and coordinating Army forces and capabilities in support of USSTRATCOM missions. Third, as the Commander of USSTRATCOM's Joint Functional Component Command for Integrated Missile Defense (JFCC IMD), I am responsible for synchronizing missile defense planning, conducting ballistic missile defense operations support, and advocating for missile defense capabilities for the Warfighter.

In accordance with these responsibilities, my intent today is threefold: to highlight USASMDC/ARSTRAT's missile defense force provider responsibilities with respect to the Army and the Geographic Combatant Commanders (GCCs); to outline JFCC IMD's role as an operational integrator of Joint missile defense for USSTRATCOM; and to summarize key Army ballistic missile defense activities and developments.

The Strategic Environment

Ballistic missile threats from regional actors such as North Korea and Iran are increasing, both quantitatively and qualitatively, and are likely to continue to grow over the next decade. In a resource constrained environment, we must be prepared to quickly adapt and confront various threats. Holistic strategies that effectively integrate offensive and defensive capabilities are essential. It is of utmost importance that we prioritize missile defense resources to optimize these capabilities for the Warfighter.

To meet the objectives of the current Defense Strategic Guidance, USSTRATCOM and the Army continue to provide and enhance homeland and regional missile defense. We have worked with partners in U.S. Pacific Command (USPACOM), U.S. Northern Command (USNORTHCOM), and USSTRATCOM to review and improve our capabilities in the USPACOM area of responsibility in accordance with the Department's strategy to rebalance toward the Asia Pacific region. The deployment of a Terminal High Altitude Area Defense (THAAD) battery to Guam has enhanced our ability to protect U.S. territories in the region and signal our commitment to our regional partners. The March 2013 Secretary of Defense (SECDEF) announcement of the deployment of 14 additional Ground-Based Inceptors at Fort Greely, Alaska and a second missile defense sensor in Japan will provide improved capability and capacity to defend the Nation against a limited ballistic missile attack. Toward this end, we continue to work with regional partners and allies to increase our information and data sharing.

Ballistic and cruise missiles "have the potential to pose catastrophic threats that could directly affect our Nation's security and prosperity."

-- U.S. Defense Strategy January 2012

The Defense Strategic Guidance also establishes a priority to maintain a strong commitment to security and stability in Europe and the Middle East. We are continuing to build capability and capacity in these regions consistent with the objectives of the Phased Adaptive Approach to regional missile defense. To further protect our allies and

partners in these regions, the Army has deployed additional Patriot air and missile defense forces to Turkey and Jordan.

In summary, the growing complexity of the strategic environment based on technological advances of the threat and fiscal realities require cost efficient and effective methods of integrating current and future capabilities. We will continue to partner with the Missile Defense Agency (MDA) and Combatant Commands to ensure we pursue a fiscally responsible path to keep pace with evolving threats by identifying and prioritizing capability additions that provide the greatest operational value.

The Workforce—Recognizing and Protecting Our Greatest Asset

These challenges I've highlighted cannot be mitigated without the dedication of our greatest asset—our people. During the DoD Space hearing before this Subcommittee a few weeks ago, I felt it appropriate to highlight our workforce and the Army's commitment to deter instances of sexual harassment and assault. At USASMDC/ARSTRAT and JFCC IMD, our people are our most enduring strength. The Service Members, Civilians, and Contractors at USASMDC/ARSTRAT and JFCC IMD support the Army and Joint Warfighter each and every day, both those stationed in the homeland and those deployed across the globe. Within USASMDC/ARSTRAT and JFCC IMD, we remain committed to providing trained and ready Service Members and Civilians to operate and pursue enhanced system capabilities for the Nation's ballistic missile defense system (BMDS).

In step with the Army, our USASMDC/ARSTRAT and JFCC IMD leadership team embraces the imperatives of Sexual Harassment / Assault Response and Prevention (SHARP). As stated by the Chief of Staff of the Army, sexual harassment and sexual assault violate everything the U.S. Army stands for, including our Army Values and Warrior Ethos. At USASMDC/ARSTRAT, I will continually assess the effectiveness of our SHARP efforts to ensure we are meeting the needs of our Soldiers, Civilians, and family members. Our workforce deserves nothing less.

Accomplishment of Missile Defense Tasks

USASMDC/ARSTRAT, a force provider for missile defense capabilities, is a split-based command with dispersed locations around the globe that are manned by multi-component Soldiers, Civilians, and Contractors. Organizations around the world, including USTRATCOM, USNORTHCOM, and the GCCs leverage our capabilities. Our Title 10 responsibilities include operations, planning, integration, control, and coordination of Army forces and capabilities in support of USSTRATCOM's missile defense mission. USASMDC/ARSTRAT also serves as the Army's global operational integrator for missile defense, the Army's proponent for global missile defense force modernization, and the Army's technical center lead to conduct air and missile defense related research and development in support of Army Title 10 responsibilities.

Our operational function is to provide trained and ready missile defense forces and capabilities to the GCCs and the Warfighter which address today's requirements.

"Homeland defense and support to civil authorities require strong, steady-state force readiness, to include a robust missile defense capability."
-- Priorities for 21st Century Defense January 2012

For example, USASMDC/ARSTRAT Soldiers, serving in the homeland and in remote and austere forward deployed locations operate the Ground-Based Midcourse Defense (GMD) system and the Army Navy / Transportable Radar Surveillance Forward-Based Mode (AN/TPY-2 FBM) radars. A summary of the ongoing missile defense capabilities provided by our missile defense professionals is highlighted below.

Support to Global Ballistic Missile Defense (BMD): Soldiers from the 100th Missile Defense Brigade, headquartered in Colorado Springs, Colorado, and the 49th Missile Defense (MD) Battalion, headquartered at Fort Greely, Alaska, remain ready, 24/7/365, to defend our Nation and its territories from a limited intercontinental ballistic missile attack. Under the operational control of USNORTHCOM, Army National Guard and active component Soldiers operate the GMD Fire Control Systems located at the Fire Direction Center in Alaska, the Missile Defense Element in Colorado, and the GMD Command Launch Element at Vandenberg Air Force Base, California. These Soldiers,

in conjunction with JFCC IMD and USNORTHCOM, also oversee the maintenance of GMD interceptors and ground system components. At the Fort Greely site, 49th MD Battalion military police secure the interceptors and communications capabilities at the Missile Defense Complex from physical threats. The GMD system remains our Nation's only defense against a limited ICBM attack.

Support to Regional Capabilities: The 100th Missile Defense Brigade also supports GCCs with AN/TPY-2 FBM radar detachments and provides subject matter expertise on operator training and certification. These operational capabilities are present today at strategic locations around the globe.

GMD System Test and Development: In addition, soldiers from the 100th MD Brigade actively participate in GMD test activities and continue to work with Missile Defense Agency (MDA) developers on future improvements to the GMD system.

Ballistic Missile Early Warning: In support of the Joint Force Commander's theater force protection, USASMDC/ARSTRAT continues to provide ballistic missile early warning within various theaters of operations. The 1st Space Brigade's Joint Tactical Ground Station (JTAGS) Detachments, under the operational control of USSTRATCOM's Joint Functional Component Command for Space, but operated by USASMDC/ARSTRAT space-professional Soldiers, monitor enemy missile launch activity and other infrared events. They provide essential information to members of the air, missile defense, and operational communities. Our JTAGS Detachments are globally forward, providing 24/7/365, dedicated, assured missile warning to USSTRATCOM and GCCs in support of deployed forces.

Our second major task is to build and mature future missile defense forces—our capability development function. These are the missile defense capabilities we will provide tomorrow. A major component of our capability development function is to train Army Soldiers on missile defense systems. During the past year, USASMDC/ARSTRAT trained over 350 Soldiers and recertified as an Army Learning Institution of Excellence for missile defense training.

Providing Greater Missile Defense Capabilities to Future Warfighters

The Army uses established and emerging processes to document its missile defense needs and pursue Army and Joint validation of its requirements. As a recognized Army Center for Analysis, USASMDC/ARSTRAT conducts studies to determine how best to meet the Army's assigned missile defense responsibilities. With this information, we develop the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) domains to mitigate threats and vulnerabilities for MDA-developed GMD and AN/TPY-2 FBM missile defense systems. This disciplined approach helps to ensure limited resources are applied where Warfighter operational utility can be most effectively served.

In our third major missile defense task, USASMDC/ARSTRAT provides critical technologies to address future needs that will enhance Warfighter effectiveness—our materiel development function. In USASMDC/ARSTRAT, our technology development function is primarily focused on space and high altitude. While MDA is the principal materiel developer for ballistic missile defense, USASMDC/ARSTRAT has a number of ongoing missile defense related materiel development efforts, to include ongoing research and development of an OSD sponsored conventional offensive strike capability to address ballistic missile threats. A brief summary of two of these research and development efforts, as well as an overview of an essential Army testing range, follows.

High Energy Laser Mobile Demonstrator: As we have repeatedly witnessed during conflicts in both Iraq and Afghanistan, insurgents pose serious dangers to U.S. forward operating bases by employing quick-attack, low-trajectory, rockets, artillery, and mortar (RAM) strikes. The technology objective of the High Energy Laser Mobile Demonstrator (HEL MD) is to demonstrate a solid-state laser weapon system that will serve as a complementary kinetic energy capability in countering RAM projectiles. This directed energy weapon system will also have a significant capability against unmanned aerial vehicles (UAVs). An initial demonstration was recently completed against short range mortars, UAVs, and UAV-mounted intelligence, surveillance, and reconnaissance sensors. This demonstration served as a risk reduction for future subsystem development and integration while advancing this technology effort to a 50 kilowatt demonstration in 2017. The 50 kilowatt HEL MD will consist of a ruggedized and

supportable high energy laser with subsystems installed on a tactical military vehicle to enhance the safety of deployed forces. The synergy of both directed and kinetic energy systems has the potential to enhance significantly our homeland defense capabilities, particularly against cruise missile and indirect fire threats.

Low-Cost Target Development: The Army continues to pursue a technology effort to develop a suite of low cost targets for the Patriot testing program. The intent is to design threat-representative targets at a substantially reduced cost for short-range ballistic missile testing. Over the past year, using existing excess solid rocket motors, the Army realized significant savings within its operational testing account. The Army will continue to leverage technology advancements in order to realize less expensive targets that are representative of actual threats.

Missile Defense Testing: USASMDC/ARSTRAT operates the Ronald Reagan Ballistic Missile Test Site (RTS). RTS, located on the U.S. Army Garrison - Kwajalein Atoll in the Republic of the Marshall Islands, is critical to both offensive and defensive missile testing requirements, such as the GMD system and the U.S. Air Force strategic ballistic missile systems. In addition to their testing mission, personnel at the Reagan Test Site conduct continuous operational space surveillance and object identification missions.

Joint Functional Component Command for Integrated Missile Defense—Synchronizing Missile Defense Operational Level Planning and Support

The Joint Functional Component Command for Integrated Missile Defense, or JFCC IMD, is USSTRATCOM's missile defense integrating element and has been operational for nine years. Like the other Joint Functional Component Commands, JFCC IMD was formed to operationalize USSTRATCOM missions and allow the headquarters to focus on integration and advocacy. Headquartered at Schriever Air Force Base in Colorado Springs, Colorado, the JFCC IMD is manned by professional Army, Navy, Air Force, Marine Corps, Civilian, and Contractor personnel.

As the SECDEF and various Combatant Commanders have previously testified, the Warfighter remains confident in our ability to protect the Nation against a limited ballistic missile attack, even in the face of the changing fiscal environment. We are

actively engaged with MDA and the Combatant Commanders to optimize and execute the Administration's plan to increase the number of ground-based interceptors (GBIs) at Fort Greely from 26 to 40 and to deploy a second AN/TPY-2 FBM radar to Japan.

We have collaborated with USNORTHCOM, USSTRATCOM, and MDA to identify homeland interceptor sites that best meet operational requirements. The four sites recommended for Environmental Impact Statement analyses have been provided to this subcommittee. The operational contributions of a third interceptor site can vary based on the overall level of improvement to the strategic BMDS. Although MDA continues the planning work necessary to implement this measure, I recommend the priority of investment should be to programs that improve discrimination and tracking capabilities and overall GBI system reliability.

Defense of the Homeland Priority Requires Execution of a Holistic Global Missile Defense Plan

On behalf of USSTRATCOM, JFCC IMD is working across the military enterprise to increase the integration of existing capabilities in order to maximize efficiency and effectiveness to protect the homeland, our deployed forces, partners, and allies. The key force multiplier is "integration", which is a critically important mission area for JFCC IMD and directly supports USSTRATCOM's assigned Unified Command Plan (UCP) responsibilities for missile defense.

As an operational and functional component command of USSTRATCOM, JFCC IMD has derived five key mission tasks from the USSTRATCOM UCP responsibilities:

- Synchronize operational level planning, integrate security cooperation activities, and recommend allocation of forces via the global force management process.
- Conduct operations support and asset management for missile defense forces and provide alternative execution support.
- Integrate Joint BMD training, exercises, and test activities.
- Advocate for future capabilities, conduct analysis and assessments, and recommend the operational acceptance of missile defense capabilities into the architecture.

- Provide information system security and network support to assure a reliable BMDS communications network.

To accomplish each of these five mission tasks, we maintain close collaborative relationships with the GCCs, MDA, the Services, the Office of the Secretary of Defense (OSD), the Joint Staff, and our allies. Through collaborative processes, we continually add to our deployed capability while gaining operational experience and confidence in our collective ability to defend our Nation, deployed forces, partners, and allies. Following, I will highlight some of our collaborative efforts to enhance missile defense planning and capabilities for both the homeland and regional architectures.

Expansion and Integration of the Missile Defense Architecture: In response to the changing strategic environment, the SECDEF directed us to bolster homeland and regional missile defense capabilities. In addition to the previously deployed AN/TPY-2 FBM radars and deployment of the THAAD battery to Guam, we are finalizing the plan to deploy an additional FBM radar in the PACOM area of responsibility, and we are expanding our missile defense collaboration with allies. We are maturing the European Phased Adaptive Approach (PAA) with the forward deployment and stationing of Aegis BMD ships in Rota, Spain, developing the Aegis Ashore site in Romania, and continuing the production of the SM-3 IB interceptors. Given many of the challenges associated with implementation of these architectures, JFCC IMD, supporting USSTRATCOM as the global synchronizer for missile defense, is collaborating with the GCCs to assess and address the cross regional gaps in the areas of planning, policy, capabilities, and operations.

"The United States will continue to defend the homeland against the threat of limited ballistic missile attack".

--Ballistic Missile Defense Review February 2010

Global Assessment: As regional phased adaptive approaches mature, and with homeland defense at the forefront, JFCC IMD collaborates closely with the GCCs to assess the level of risk associated with the execution of their operational plans given their allocation of BMD capabilities. The overall assessment serves to shape

recommendations for global force management and advocacy efforts for future capability investments. We have completed the 2013 Global IAMD Assessment and are currently conducting the 2014 assessment. For the 2013 assessment, we expanded the previous BMD-only assessment to look at integrating both air and missile defense assets to more accurately reflect the way we fight and the associated operational risks.

With regard to regional threats, JFCC IMD assessments indicate that addressing missile defense threats will remain a challenge. Our research, supported by the 2013 Global Assessment, reinforces the fact that GCC demands for missile defense capabilities exceed the available BMD inventory. We must continue to address this mismatch using mobile and re-locatable missile defenses and a comprehensive force management process. We also possess a full spectrum of offensive and defensive capabilities to deter and defend against the ballistic missile threat.

Global Force Management: The increasing demand of BMD assets is managed by the Joint Staff and the Services. USSTRATCOM, as the designated Joint Functional Manager for missile defense, relies upon JFCC IMD to evaluate and recommend sourcing of BMD requirements based on assessed risk. Due to the high demand, low-density nature of missile defense assets, all sourcing decisions have a direct and significant impact to other combatant commanders' campaign and contingency plans. The Global Force Management process enables senior leaders to make more informed BMD sourcing decisions based on global risk.

Multi-Regional BMD Asset Management: JFCC IMD, in coordination with USSTRATCOM and the GCCs, manages the availability of missile defense assets to balance operational readiness postures, scheduled and unscheduled maintenance activities, and MDA and Services' test requirements. This important process allows us to continually assess our readiness to defend against a ballistic missile attack and to recommend adjustments to optimize the overall BMD architecture.

"The United States will seek to lead expanded international efforts for missile defense."
--Ballistic Missile Defense Review Report February 2010

Training, Exercises, and War Games: JFCC IMD continues to focus on the integration of allies into regional missile defense architectures. We leverage training,

exercises, and war games to increase dialogue and partnership. We are underway with Nimble Titan 14, our biannual multinational BMD war game. While budget constraints have caused us to reduce the scale for regional exercise from interactive war games to table-top exercises, we are still able to accomplish many of the stated objectives. For the first time, Nimble Titan 14 will include the participation of the Kingdom of Saudi Arabia, the United Arab Emirates, Turkey, Estonia, Norway, Sweden, and Finland. In addition to NATO, we anticipate over 20 participating nations and a large number of international observers. Our campaign goals for this iteration of Nimble Titan will advance national policy objectives by helping mature NATO's new missile defense mission area; explore options for increased regional multilateral BMD cooperation; and openly work coalition BMD issues with Middle East nations. We continue to focus on cross-regional coordination, offense/defense force integration, sensor integration, and multinational BMD planning solutions.

The Nimble Titan war game is an invaluable medium to advance U.S. missile defense policy. The war game allows us to mature cooperative relationships with our allies and partners as well as advance our Nation's and combatant command's regional security objectives. This event is critical to developing a common understanding of policy hurdles associated with combined BMD architectures. Conclusions derived from training, exercises, and war games will continue to shape our recommendations on asset allocation, resources, and operational planning through the existing DoD and missile defense community management structures.

Joint BMD Training: In August 2012, the DoD designated USSTRATCOM as the lead for integrating and synchronizing Joint BMD training. This designation mandated the transfer of missile defense training resources and responsibilities from MDA to USSTRATCOM by the end of fiscal year 2013. JFCC IMD is executing this mission on behalf of USSTRATCOM and declared initial operating capability on October 1, 2013.

In coordination with USSTRATCOM, the Joint Staff, Combatant Commands, and the Services, we have developed a comprehensive program of actions and milestones to achieve a full operating capability with the creation of a Joint BMD training center of excellence by the end of next fiscal year. The center of excellence will be located in Colorado Springs and will coordinate and synchronize all aspects of BMD training and

education to further develop Commanders, Warfighters, and Civilians engaged in BMD planning and operations. This approach builds upon existing capabilities and closes gaps between Service, Joint, and regional BMD training and education. As part of the center of excellence construct, our training capability will evolve into a "blended learning/higher education" approach to improve efficiency and reduce the cost of providing Joint BMD training and education.

Warfighter Acceptance and Integrated Master Test Plan: As the missile defense architectures matures, operators call for a credible, comprehensive assessment of new capabilities to inform Warfighter operational acceptance. In 2013, the DoD conducted a new regional operational test that assessed the integrated capability of Aegis BMD, AN/TPY-2 FBM, and THAAD. This first-of-its-kind test validated the THAAD's integrated regional capability against multiple threats in an operationally realistic environment. Our next operational test in fiscal year 2015 will build upon the success of the previous test. We plan to conduct an integrated test of key elements of EPAA Phase II, specifically the integrated capability in AN/TPY-2, Aegis BMD, and Aegis Ashore. Additionally, JFCC IMD is working closely with MDA, the Office of the Director, Operational Test and Evaluation, and USNORTHCOM to address issues uncovered in recent GBI testing of both the CE-I and CE-II variants. Although the investigation into last year's CE-I flight test failure is not complete, the early indications provide assurance that technological remedies are being instituted for the GBI fleet. We will continue to partner with the MDA to ensure we maintain an annual test cadence to maintain Warfigher confidence.

In summary, JFCC IMD serves an integrating role for missile defense across multiple regions as we operationalize new capabilities, evolve command relationships, and reinforce our missile defense partnerships with allies. In view of worldwide events and current fiscal challenges, JFCC IMD remains focused on our key mission task to collaborate with the GCCs and MDA to posture our forces to meet current and future ballistic missile threats. Our missile defense capability continues to strengthen as Warfighters gain increased competence and confidence in the BMD System. While work remains to be done, we have made significant progress in evolving the global

missile defense capabilities, thereby strengthening the defense of the homeland, and advancing our partnerships with allies in this pressing endeavor.

Army Contributions to the Nation's Missile Defense Capabilities

The Army is a close partner with the MDA in supporting its materiel development efforts. We continue to develop and field systems that are integral to our Nation's air and missile defense capabilities. A summary follows of the Army's major air and missile defense systems, aligned within the Assistant Secretary of the Army for Acquisition, Logistics, and Technology organizational structure.

Army Integrated Air and Missile Defense (IAMD): Air and missile defense (AMD) is an enduring Army core function and an essential component of the Army mission to provide wide area security. To meet this mission, the 2012 Army AMD Strategy details a plan of action to develop a comprehensive portfolio of IAMD capabilities intended to provide protection against the expanding threat of ballistic and cruise missiles, unmanned aerial systems, and long-range, precision rocket, artillery, and mortar attacks.

Within the AMD arena, the IAMD Battle Management Command System (IBCS) remains the Army's highest priority effort and serves at the foundation for Army AMD modernization. The program will field a common mission command system to all echelons of Army AMD forces to defend against rockets, artillery, and mortars; cruise missiles; manned and unmanned aircraft; air-to-ground missiles; and tactical ballistic missiles. IBCS provides a comprehensive solution for the AMD gap by coordinating air surveillance and fire control across Services and with coalition partners. During this past year, Soldiers demonstrated incremental capabilities of IBCS. Additional efforts are underway to integrate IBCS and C2BMC to support the BMD mission.

Patriot/Patriot Advanced Capability-3 (PAC-3): Patriot/PAC-3 is the Army's premier weapon system against air and tactical ballistic missile threats. With the DoD decision to end U.S. participation in the Medium Extended Air Defense System program at completion of the design and development phase, the Army continues to make improvement investments to the Patriot system to support the AMD strategy. The aim is to increase reliability, drive down operational and sustainment costs, and remain viable

well into the future. Seeing that about half of all Patriot units are currently deployed, operational tempo and stress remain high.

A number of significant Patriot/PAC-3 capability enhancements have been accomplished over the past year. Among the accomplishments were the completion of the Army's planned upgrades to all 15 PAC-3 fire units, fielding of the 15th Patriot battalion, and continued successful operational flight tests of the next generation PAC-3 missile, the Missile Segment Enhancement (MSE). During recent successful testing, both tactical ballistic missiles and air breathing threats were simultaneously engaged. The Army conducted a successful Milestone C defense acquisition board and remains on track for delivery of the MSE to the Warfighter by the fourth quarter of 2015. Additionally, the Patriot radar received a new digital processor. Coupled with recent software upgrades, the new digital processor increases performance of the radar against evolving threats while dramatically improving reliability, availability, and maintainability.

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS): The JLENS system provides long-range, persistent, and elevated surveillance, detection, classification, identification, and fire control quality tracking of airborne objects such as cruise missiles, manned and unmanned aircraft, and large caliber rockets. The system has demonstrated the capability to track surface moving targets. In accordance with direction from OSD and the Joint Staff, the Army is scheduled to deploy the JLENS system to Aberdeen Proving Grounds, Maryland. With this deployment, the Army will initiate a three-year operational exercise of how surveillance aerostats improve missile defense sensor capabilities.

Terminal High Altitude Area Defense System: THAAD, a key component of the BMDS architecture, is designed to defend deployed and allied forces, population centers, and critical infrastructure against short- and medium-range ballistic missiles. THAAD is a high demand, low-density asset. A fully operational THAAD battery consists of 95 Soldiers, an AN/TPY-2 FBM radar, six launchers, a fire control and communications element, a battery support center, and a support element. THAAD has a unique capability to engage threats in both the endo- and exo-atmosphere using proven hit-to-kill lethality. There are now four activated THAAD batteries. Equipment

training and fielding has been completed for two of the batteries. In April 2013, one of these batteries conducted the first ever operational deployment of THAAD in response to the escalation of tensions in the Pacific region. The third THAAD battery is currently undergoing training and will be operationally available next year; the fourth battery is scheduled to become fully operational the following year. The addition of THAAD capabilities to the Army's air and missile defense portfolio brings an unprecedented level of protection against missile attacks to deployed U.S. forces, partners, and allies.

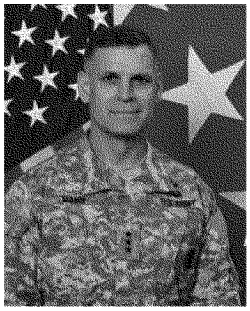
Conclusion

Mr. Chairman and Ranking Member Cooper, as a member of the Joint missile defense community, the Army will continue to pursue enhancements to the Nation's missile defense system. As a Service, the Army has lead responsibility for GMD, AN/TPY-2 FBM, Patriot, and THAAD. Our trained and ready Soldiers operating GMD elements in Colorado, Alaska, and California remain on point to defend the homeland against a limited intercontinental ballistic missile attack. As a force provider to the GCCs, our Soldiers ensure essential regional sensor capabilities and ballistic missile early warning. USSTRATCOM, through the JFCC IMD, continues to integrate BMDS capabilities to counter global ballistic missile threats and protect our Nation, deployed forces, partners, and allies.

While the operational, doctrine, and materiel development enhancements of the BMDS are essential, our most essential assets are the Soldiers, Sailors, Airmen, Marines, and Civilians who develop, deploy, and operate our missile defense system. I appreciate having the opportunity to address missile defense matters and look forward to addressing any of your questions.

U.S. Strategic Command Biography

Lieutenant General David L. Mann
Commander, JFCC-IMD



LTG David L. Mann assumed command of the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command and Joint Functional Component Command for Integrated Missile Defense in August 2013. He is a Distinguished Military Graduate of Gettysburg College after graduating from Millersville University in 1981. He has served in a variety of command and staff assignments, both in the continental United States and overseas.

Most recently, he served as Commanding General of the U.S. Army Recruiting Command at Fort Knox, KY, where he was responsible for more than 13,000 Soldiers and Civilians assigned throughout the United States, Europe and the Far East with the primary mission of meeting the Army's recruiting goals.

Previous command assignments include: Battalion Commander, 2nd Battalion, 44th Air Defense Artillery Regiment, 101st Airborne Division (Air Assault), Fort Campbell, KY, where elements of the battalion deployed to Kosovo in support of Operation Joint Guardian; Brigade Commander, 108th Air Defense Artillery Brigade, XVIII Airborne Corps where he deployed to Iraq in support of Operation Iraqi Freedom; Commanding General, White Sands Missile Range, N.M.; and Commanding General, 32nd Army Air and Missile Defense Command.

Previous staff assignments include: Aide-de-Camp to the Commanding General, 24th Infantry Division (Mechanized), Fort Stewart, GA; Battalion Operations Officer, 1st Battalion, 3rd Air Defense Artillery (BSFV/Stinger), 4th Infantry Division (Mechanized) where he deployed to Guantanamo Bay, Cuba, as part of Joint Task Force 160; Operations Research and Systems Analysis Officer, Directorate of Program Analysis and Evaluation, Pentagon; Aide-de-Camp to the Vice Chief of Staff, Army; Senior Planner with duty on the Operation Enduring Freedom Current Operations Team, the Joint Staff following the events of 9-11; Chief of Staff, U.S. Air Defense Artillery Center, Fort Bliss, Texas; Deputy Commanding General, U.S. Army Recruiting Command, Fort Knox.

LTG Mann holds a Master of Science degree in Engineering Management from George Washington University and a Master of Arts degree in National Security and Strategic Studies from the U.S. Naval War College.

His awards and decorations include the Distinguished Service Medal, Legion of Merit (three oak leaf clusters), Defense Meritorious Service Medal, Meritorious Service Medal (four oak leaf clusters),

Army Commendation Medal, Joint Service Achievement Medal (oak leaf cluster), Army Achievement Medal (oak leaf cluster), Parachutist Badge, Air Assault Badge, Recruiter Badge, and the Joint and Army Staff Identification Badges.

LTG Mann is married to the former Robyn M. Priester of Lancaster, PA. They have two children, Ryan, and his wife Christina, and Lauren, who is married to SFC Uili Allen, an Army recruiter. The Manns are also the proud grandparents of two grandsons, Te'o and Jackson, and a granddaughter, Kealani.

Current as of October 2013

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Unclassified Statement of

Vice Admiral James D. Syring

Director, Missile Defense Agency

Before the

House Armed Service Committee

Subcommittee on Strategic Forces

Tuesday, March 25, 2014

Embargoed Until Released by the
House Armed Services Committee
United States House of Representatives

Vice Admiral J.D. Syring, USN
Director, Missile Defense Agency
Before the
House Armed Services Committee
The Strategic Forces Subcommittee
March 25, 2014

Good morning, Chairman Rogers, Ranking Member Cooper, distinguished Members of the subcommittee. I appreciate this opportunity to testify before you today. Our current budget request of $7.459 billion for Fiscal Year (FY) 2015 will continue the development of defenses for our Nation, deployed forces, allies, and international partners against increasingly capable ballistic missiles. The FY 2015 missile defense program will support the warfighter and needs of the Combatant Commanders (COCOMs) with the development and deployment of interceptors, sensors, and the command, control, battle management and communications (C2BMC) system that makes up the integrated Ballistic Missile Defense System (BMDS). Our PB 2015 request supports needed improvements in homeland defense and continues strong support of regional defense initiatives. Our FY 2015 program plans include continued investments in advanced technologies and future capabilities to keep pace with the increasingly complex threat.

Ballistic Missile Threat

The threat continues to grow as our potential adversaries are acquiring a greater number of ballistic missiles, increasing their range and making them more complex, survivable, reliable, and accurate. The missile defense mission is becoming more challenging as potential adversaries incorporate BMD countermeasures. Space-launch activities in Iran and North Korea involve multistage systems that serve to further the development of ballistic missile technology for longer-range systems, including

intercontinental ballistic missile (ICBM)-applicable technologies and systems. As the Director for National Intelligence testified last year, "Iran has demonstrated an ability to launch small satellites, and we grow increasingly concerned that these technical steps . . . provide Tehran with the means and motivation to develop larger space-launch vehicles and longer-range missiles, including an ICBM." Iran could develop and test an ICBM capable of reaching the United States by 2015. In addition to the Taepo Dong 2 space launch vehicle/ICBM, North Korea is developing and has paraded the KN08 road-mobile ICBM and an intermediate-range ballistic missile (IRBM) capable of reaching Guam and the Aleutian Islands. Iran also has steadily increased its ballistic missile force, deploying next generation short- and medium-range ballistic missiles (SRBMs and MRBMs) with increasing accuracy and new submunition payloads. Iran has publicly demonstrated the ability to launch simultaneous salvos of multiple rockets and missiles. Demonstrating that it is capable of modifying currently deployed ballistic missile systems, Iran has flight-tested a Fateh-110 ballistic missile called the Khalij Fars by adding a seeker to improve the missile's accuracy against sea-based targets. This ballistic missile has a range of 300 km, which means it is capable of threatening maritime activity throughout the Persian Gulf and Strait of Hormuz.

Support for the Warfighter

Our overriding goal is to provide support to the warfighter. With this budget we will maintain our commitment to build out homeland defenses to 44 Ground Based Interceptors (GBIs), pending a successful return to intercept this summer, and focus on Ground-based Midcourse Defense (GMD) system reliability and GBI performance. We will also maintain our commitment to deploy Phases 2 and 3 of the European Phased

Adaptive Approach (EPAA). We are continuing efforts to improve the performance of the Aegis Weapons System and deliver Standard Missile (SM-3) Block IB guided missiles. We will also deploy a second forward-based X-band AN/TPY-2 radar in Japan, improving homeland and regional defense capabilities and increasing our global operational AN/TPY-2 radar posture, and build and improve the C2BMC infrastructure at fielded sites. We plan to procure interceptors for Terminal High Altitude Area Defense (THAAD) and, pursuant to our agreement with the Army, fund additional AN/TPY-2 spares and an additional THAAD Battery.

Last year we conducted or participated in over 17 multi-event exercises and wargames, which are critically important to the warfighter and the intensive engineering efforts across the Agency. MDA also worked collaboratively with Combatant Commanders, Office of the Secretary of Defense (OSD) and the Services to complete a strategy and roadmap providing a series of near-, mid- and far-term architecture options for the BMDS that are the basis for program planning for the rest of this decade. In response to the continued fielding by U.S. adversaries of air, missile, and rocket capabilities, in May 2013 MDA assumed the responsibility of Technical Authority for Integrated Air and Missile Defense (IAMD), and as such will lead the Department's joint IAMD engineering and integration efforts, including interface definition and control as well as technical requirements allocation.

Finally, we continue to work closely with the Director, Operational Test & Evaluation (DOT&E) and with independent testers and the Services. From October 2012 to the present, we have executed 9 high profile flight tests, 13 if you include our involvement with and contributions to Israeli flight tests. The highlight was Flight Test

Operational – 01 (FTO-01), the historic and unparalleled operational test of our regional layered ballistic missile defenses this past September, which involved THAAD and Aegis BMD, ground- and sea-based forward deployed sensors, and C2BMC. The two targets were launched on operationally realistic trajectories towards a defended area near the Reagan Test Site in the Pacific Ocean. This was a highly successful operational test involving MDA, the Operational Test Agency, Joint Functional Component Command for Integrated Missile Defense, and U.S. Pacific Command, as well as U.S. Army Soldiers from the Alpha Battery, 2nd Air Defense Artillery THAAD, U.S. Navy Sailors aboard the USS Decatur and British sailors aboard the HMS Daring, and Airmen from the 613th Air and Operations Center. Similar to the Flight Test Integrated – 01 test conducted in October 2012, FTO-01 provided the warfighters confidence in the execution of their integrated air and missile defense plans and the opportunity to refine operational doctrine and tactics, techniques and procedures.

In FY 2015 we have 15 flight tests in the Integrated Master Test Plan. As the BMDS matures, we are continuing to increase the complexity in our flight test program by: conducting more system-level operational tests; increasing the number of BMDS assets in those tests; increasing the numbers, types and ranges of the threat representative targets we use; conducting more simultaneous launches; and replicating potential wartime scenarios to realistically exercise warfighting chain of command to evaluate command and control concepts of operation and tactics, techniques and procedures. We also have system-level ground tests that combine the warfighter chain of command with the developmental system and test under varying conditions to improve confidence in the system being deployed to Combatant Commands. We are entering a

period of unprecedented complexity and increased testing tempo based on that complexity. Our flight tests will also involve an increasingly stressful set of threat representative targets as well as longer range interceptors for our regional capabilities. Over the coming years, U.S. government stakeholders – to include Soldiers, Sailors, Marines, and Airmen – and allies will have a larger role and impact in our test program than ever before.

Homeland Defense

MDA's highest near-term priority remains the successful GMD intercept flight test of the newest GBI Exo-atmospheric Kill Vehicle (EKV) – the Capability Enhancement (CE)-II EKV. Based on our analysis of the data from the successful January 2013 non-intercept controlled flight test of the CE-II GBI (CTV-01), we plan to conduct FTG-06b, an intercept flight test, this summer. CTV-01 demonstrated the successful dampening of the vibration environments that affected the navigation system and resulted in the failure of the FTG-06a mission conducted in December 2010. FTG-06b will demonstrate the ability of the CE-II EKV to discriminate and intercept a lethal object from a representative ICBM target scene. An increase in the number of GBIs in the fleet assumes a successful return to intercept of the CE-II EKV.

Last July, with FTG-07, we conducted an intercept flight test of the upgraded CE-I, or first generation, EKV. We made numerous improvements to the CE-I fleet through upgrades since the last successful CE-I flight test in 2008. In FTG-07 the EKV did not intercept the target because the kill vehicle on the GBI did not separate from the booster's third stage. The failure investigation is progressing toward a root cause. Once

the investigation is concluded, we will take steps to make any fixes to the fleet that need to be made for both the CE-I and CE-II EKVs.

Today, 30 operational GBIs protect the United States against a limited ICBM attack from current regional threats, such as North Korea and Iran. Last year we began refurbishment of Missile Field 1 at Fort Greely, Alaska (FGA) to develop silo capacity to support delivery of an additional 14 GBIs, continued emplacing GBIs in Missile Field 2 (MF 2), and continued conducting GBI component testing and refurbishing currently deployed GBIs to test and improve their reliability. We are requesting approximately $1.3 billion in FY 2015 for homeland defenses. We remain committed to a "fly before you buy" acquisition approach. Pending a successful outcome of the GMD intercept flight test this summer, we will resume taking delivery of GBIs and emplace them in MF 2 and MF 1 as we progress towards 44 by the end of FY 2017. Beginning in FY 2016, we will acquire replacement GBIs to support GMD operations, testing, and spares, pending the outcome of flight testing.

Construction of the GBI In-Flight Interceptor Communication System (IFICS) Data Terminal (IDT) at Fort Drum, New York is proceeding on schedule. Once it is operational in late-2015, the east coast IDT will enable communication with GBIs launched from Fort Greely, Alaska and Vandenberg Air Force Base in California over longer distances and improve defenses for the eastern United States by increasing system performance in specific engagement scenarios.

We currently operate a forward-based X-band radar, the AN/TPY-2 radar, in Shariki, Japan, which is in the northern part of that country. In September 2012 the Secretary of Defense directed the deployment of a second AN/TPY-2 X-band radar in

Japan to provide improved tracking coverage for launches out of North Korea. Working with our Japanese partners, we expect to complete the deployment of the second AN/TPY-2 radar in Kyogamisaki in southern Japan by the end of this calendar year. We will also deploy a new C2BMC capability which will enhance the overall performance of the radars when operating in a mutually supporting dual radar mode.

We will take additional steps to keep pace with the threats to the U.S. homeland. We have requested $99.5 million in FY 2015 to redesign and improve the GBI EKV. The redesigned EKV will be built with a modular, open architecture and designed with common interfaces and standards, making upgrades easier and broadening our vendor and supplier base. The new EKVs will improve reliability and be more producible, testable, reliable, and cost-effective and eventually will replace the kill vehicle on our current GBI fleet. We are currently assessing concepts, acquisition options, and timelines to test and field the redesigned EKV. Our goal is to begin flight testing the redesigned EKV in FY 2018. We also request $79.5 million, which includes $29 million in MILCON funding for planning and design, to begin development of a Long Range Discrimination Radar (LRDR), with deployment planned in 2020. The new long-range, mid-course tracking radar will provide persistent coverage and improve discrimination capabilities against threats to the homeland from the Pacific theater. This new radar also will give more geographic flexibility to deploy the Sea-Based X-band (SBX) radar for contingency and test use.

MDA requests $122 million in FY 2015 to support the Discrimination Improvements for Homeland Defense (DIHD) efforts. The goal of this effort is to develop and field an integrated set of capabilities to improve BMDS reliability, lethality,

and discrimination. The end result will be a deployed future BMDS architecture more capable of discriminating and destroying a reentry vehicle. Our plans in this area will support a near-term DIHD capability (2016) and a DIHD capability fielding in 2020.

We are requesting $64 million in FY 2015 for continued Sea-Based X-band (SBX) radar operations. In collaboration with the Services, Joint Staff, STRATCOM and the COCOMs, we maintained the SBX radar in Limited Test Support Status, where the radar continues to support the BMDS test program and remains available for contingency deployment under the operational command of PACOM. In 2013 SBX supported real world operations, with 49 days at-sea, and the FTG-07 GMD test with a total of 110 days at-sea and demonstrated an autonomous acquisition capability.

We are also examining locations for a possible additional CONUS interceptor site. The current GBI sites at Fort Greely, AK and Vandenberg AFB, CA provide capability necessary to protect the homeland. While there has been no decision by the Department to move forward with an additional CONUS interceptor site, such a site would add battle space and interceptor capacity should it be deemed necessary to proceed with deployment. Our CONUS Interceptor Site study determined the following sites are viable candidates and they are to be included in the Environmental Impact Statement: Fort Drum, New York; Naval Air Station Portsmouth SERE Training Area, Rangley, Maine; Ravenna Training and Logistics Site, Ohio; and Fort Custer Combined Training Center, Michigan. The Environmental Impact Statement, which will take approximately 24 months to complete, will assess environmental impacts at each of the sites, to include potential impacts to land use, water resources, air quality,

transportation, socioeconomics and other factors established by the National Environmental Policy Act.

For FY 2015 we are requesting approximately $38.6 million for our network of strategic radars. We will continue missile defense upgrades of the Early Warning Radars in Clear, Alaska and Cape Cod, Massachusetts. We expect to complete the Clear radar upgrade in 2017 and the Cape Cod upgrade in 2018. Last year MDA worked with the Air Force to begin upgrading the Early Warning Radar (EWR) at Clear, Alaska to give it a missile defense capability, providing improved ballistic missile defense sensor coverage over the continental United States and reducing sustainment and operating costs. We also transferred sustainment responsibility for the Beale (California), Fylingdales (United Kingdom), and Thule (Greenland) Upgraded Early Warning Radars back to the United States Air Force.

Regional Defenses

Deployment of regional defenses to protect our deployed forces, allies and international partners remains one of our top priorities. Our FY 2015 budget request funds the continued development and deployment of defenses against SRBMs, MRBMs, and IRBMs in support of Combatant Commanders' near-term and future priorities. MDA will continue to focus on threats from the Asia-Pacific and Middle East regions as we continue to support the European Phased Adaptive Approach to protect our deployed forces and our allies.

Terminal High Altitude Area Defense

In FY 2013 MDA delivered 37 THAAD Interceptors and expended two in flight tests, for a total of 84 delivered to Army war stock. We also delivered hardware for

fielding of the third THAAD battery: 2 Tactical Station Groups, 6 Launchers, and a set of Peculiar Support Equipment. Training of the soldiers who will operate the third THAAD battery has begun and we expect it to be completed in FY 2015. This year we expect to deliver the fourth THAAD battery. In collaboration with the Services, Joint Staff, STRATCOM and the COCOMs, we achieved first operational deployment of the THAAD capability for the defense of Guam. In recent tests we demonstrated THAAD's ability to intercept an MRBM as part of an integrated operational test with Aegis BMD (FTO-01), the second intercept of this class of target since FTI-01. THAAD has put together a remarkable record of success, successfully intercepting 11 out of 11 targets with the operationally configured interceptor.

For FY 2015, MDA is requesting $464 million for THAAD procurement, which includes the purchase of 31 THAAD interceptors. We also are requesting $300 million in RDT&E funding in FY 2015 and $76 million for THAAD operations and maintenance. We will continue to enhance THAAD's ability to operate through post-intercept debris, enable launch of THAAD's interceptors using sensor data provided by other BMDS sensors, and maintain capability against current and evolving threats. THAAD will conduct two flight tests in FY 2015. In FTT-18 THAAD will demonstrate an intercept of a separating IRBM target using the THAAD radar, launcher, fire control and communication, interceptor closed loop operations, and engagement functions. In FTO-02 THAAD will engage a SRBM with associated objects and demonstrate advanced radar algorithms.

Aegis Ballistic Missile Defense

Last year MDA completed six BMD Weapons System installations on Aegis ships: two Aegis BMD 3.6; three Aegis BMD 4.0; and one Aegis BMD 5.0 (USS JOHN PAUL JONES) in conjunction with the Navy's Aegis Baseline 9 installation. The USS JOHN PAUL JONES will replace the USS LAKE ERIE as the BMD deployable test ship to support MDA and Navy testing of Integrated Air and Missile Defense capabilities. We now have a total of 30 BMD capable Aegis ships in the Fleet. In 2013 we delivered 10 SM-3 Block IAs and 16 SM-3 Block IBs. By the end of 2015, over 65 SM-3 Block IBs will be delivered.

We are requesting $929 million in RDT&E funding in FY 2015 to continue development, testing, and installation of Aegis BMD capabilities to defeat longer range and more sophisticated ballistic missiles launched in larger raid sizes. We request $435 million in FY 2015 for Aegis BMD procurement, which includes $348 million for 30 SM-3 Block IB guided missiles and $12 million for operations and maintenance of SM-3 Block IAs. In response to the Combatant Commanders' demand for more BMD ships with the latest tested capability, Navy and MDA have incorporated Aegis BMD into the Navy's Aegis DDG Modernization Program and new construction DDGs. We will continue upgrading the capability of existing BMD ships and integrating new and modernized ships to the BMD fleet, with a planned operational availability of 43 Aegis BMD ships in FY 2019. The homeport transfer of four Aegis BMD ships to Rota, Spain began this past February with the USS DONALD COOK. Another Aegis BMD ship, USS ROSS is scheduled to transfer later this year, and the remaining two Aegis BMD ships will transfer in 2015.

With the Japan Ministry of Defense, we completed multiple SM-3 Block IIA component Cooperative Development Project Critical Design Reviews, including: Staging Assembly, Steering Control Section, Guidance System, Third Stage Rocket Motor, Sensors, Kinetic Warhead Guidance Electronics Unit Assembly, Divert and Attitude Control System, and Kinetic Warhead, culminating with an overall missile system Critical Design Review, in October 2013. Also in October, the SM-3 Block IIA completed Propulsion Test Vehicle-01 in which the missile and new composite canister both demonstrated successful and safe ignition and egress from the vertical launching system.

Last year was a significant year for Aegis BMD testing, with five for five successful intercept tests and successful transmission of Long Range Surveillance and Track data through C2BMC to the GMD system in FTG-07. FTM-20 (February 2013) demonstrated the ability of the Aegis BMD 4.0 Weapon System to Launch on Remote using data from the Space Tracking and Surveillance System (STSS) demonstrator satellites. FTM-20 employed an SM-3 Block IA against a unitary medium-range target. High quality infrared fire control data from STSS was provided through C2BMC. C2BMC generated very high quality fire control quality data and passed the track data over operational communications links to the firing Aegis ship to conduct a launch on remote engagement. This complex test proved the value of an integrated C2 and sensor network and the use of space-based sensors to expand the BMD battle space. FTM-19 (May 2013) supported the development and assessment of the Aegis BMD 4.0 Weapon System and the SM-3 Block IB prior to an FY 2014 full-rate production

decision. A second Aegis BMD ship successfully acquired the target and conducted a simulated engagement using space-based sensor data.

In a span of 23 days, Aegis BMD was a principal player in three major operational flight tests: FTO-01, FTM-21 and FTM-22, which all achieved successful intercepts. FTM-21 (September 2013) and FTM-22 (October 2013) fired SM-3 Block IBs to validate operational effectiveness and suitability of the Aegis BMD 4.0 Weapon System and the SM-3 Block IB. FTM-22 was our fifth consecutive successful intercept mission using the 4.0 Weapons System and SM-3 Block IB and an important milestone for Phase 2 of the EPAA. FTM-21 and FTM-22 also completed Director Operational Test and Evaluation Initial Operational Test and Evaluation flight testing requirements for the 4.0 Weapons System and the SM-3 Block IB.

To complete Initial Operational Test and Evaluation requirements for the 4.0 weapons system, we also conducted a tracking exercise, FTX-18, over the Atlantic Ocean in January 2014, which confirmed the capability of the 4.0 weapons system to track and engage a raid of three ballistic missile targets with simulated SM-3 Block IBs. In this event, multiple Aegis BMD baselines participated, yielding comparative raid performance data, including the Aegis Ashore Romania deckhouse at Lockheed Martin in Moorestown, New Jersey. The Aegis Ashore system will be deployed to Romania later this year.

We also continue development of a Sea Based Terminal capability to provide protection of maritime forces against advanced anti-ship ballistic missiles and increased layered defense for forces ashore. Using an incremental development approach, we are incorporating BMD capability into the Navy's Baseline 9 architecture, to include terminal

defense with the SM-6 guided missile and the BMD 5.0 weapon system. In 2013, we completed the initial design phase and initiated software development for missile and weapon system modifications. We plan to test and certify the first increment of Sea Based Terminal capability in 2015. We also finalized the requirements for the second increment of Sea Based Terminal capability, scheduled to certify in 2018.

The FY 2015 Aegis BMD flight test program will include almost all of the Standard Missile variants, with firings of SM-3 Block IBs from ships as well as the PMRF Aegis Ashore Missile Defense Test Center, execution of raid scenarios with engagements in both Anti-Air Warfare and BMD warfare areas, Launch on Remote for long-range engagements, developmental Controlled Test Vehicle firings of the SM-3 Block IIA missile, and tracking exercises for the Sea Based Terminal weapon system configuration.

European Phased Adaptive Approach

We will continue to support the EPAA to provide coverage of European NATO territory from Iranian ballistic missile threats by investing resources for EPAA development, testing and deployment. Phase 1, which provides coverage of NATO territory in Europe with the deployment of Aegis BMD 3.6 ships with SM-3 IAs and a SPY-1 radar in the Mediterranean, the AN/TPY-2 radar (Forward Based Mode) to U.S. European Command (EUCOM) in Turkey, and the C2BMC Spiral 6.4 system at Ramstein AFB in Germany, has been operational since the end of 2011.

Our goal in EPAA Phase 2 is to provide robust capability against SRBMs and MRBMs. The architecture includes the deployment of the Aegis BMD 4.0 and 5.0 weapon systems with SM-3 Block IBs at an Aegis Ashore site in Romania and at sea, .

A formal ground-breaking ceremony for the Aegis Ashore site took place in Deveselu, Romania in October 2013. The start of construction of the Aegis Ashore site in Deveselu, Romania this year involves the delivery of the deckhouse from Moorestown, N.J. to Romania. The site will be integrated into the EUCOM command and control network, tested and operational by December 2015. MDA requests $123 million in FY 2015 to continue development of the Aegis Ashore sites in Romania and Poland. We also request $226 million in FY 2015 for the continued procurement of equipment for Aegis Ashore in Poland.

Four months after disassembly and transport of the Aegis Ashore equipment to the Pacific Missile Range Facility (PMRF) began, an Aegis Light Off ceremony was held on 6 December, 2013 to commemorate the first time the Aegis Combat System was powered on, with Sailors manning the consoles and the system brought on-line at the PMRF deck house facility. We are now preparing for Aegis Ashore flight tests at PMRF this year and in 2015.

Deployment of Phase 3 will enhance and expand protection for European NATO countries and U.S. forces through the region from MRBMs and IRBMs from the Middle East. In support of EPAA Phase 3, the SM-3 Block IIA, which we are co-developing with the Japanese government, and an upgraded version of the Aegis Weapons System are on schedule to be available for deployment in 2018 at Aegis Ashore sites in Romania and Poland, and at sea. MDA requests $264 million in RDT&E funding in FY 2015 to continue the bilateral, cooperative effort. The upgraded Aegis Weapons System and C2BMC system with engage on remote AN/TPY-2 radar (forward based mode) capability combined with the faster, longer reaching SM-3 IIA will expand Aegis

BMD battle space to counter more sophisticated threats and will extend coverage to NATO allies in Europe threatened by longer range ballistic missiles.

Working closely with Navy, we will deliver the upgraded 5.1 Aegis BMD Weapons System as a part of the Navy's Baseline 9 architecture on ships for deployment worldwide in 2018 to support Combatant Commanders requirements to counter an expanded threat set. This past year we continued development of the Aegis BMD 5.1 fire control system.

Command, Control, Battle Management, and Communications and Sensors

In 2013 we continued to support warfighter operations of the EUCOM BMDS capability for regional defense. In partnership with the Combatant Commands, we maintain the capability to engage multiple simultaneous threat attacks in the region. As the foundation of BMDS, the MDA C2BMC team supported the warfighter in real world operations across multiple Areas of Responsibility, which included deployments to the Middle East, Turkey, and Kwajalein. Last year we fielded software upgrades to U.S. Northern Command (NORTHCOM), U.S. Strategic Command (STRATCOM), U.S. Pacific Command (PACOM) and Central Command (CENTCOM) and installed Spiral 6.4 MR-2 at PACOM, NORTHCOM, and STRATCOM. This year we completed software upgrades to CENTCOM and EUCOM. We also delivered the Distributed Training System to CENTCOM for Air and Missile Defense Exercise 13-2.

For the first time, in 2013, we conducted a flight test with successful debris mitigation (FTO-01) and also generated fire control quality track data from space sensors for a live fire Launch-on-Remote Aegis BMD 4.0 Weapons system and SM-3 Block IA engagement (FTM-20). In addition to continuing the enhancement of global

BMD survivable communications and support for operations and sustainment of C2BMC at fielded sites, in FY 2015 we will integrate Space Based Infrared System Increment 2 capabilities into C2BMC to support cueing of BMD sensors worldwide. We will also improve sensor data integration and battle management in C2BMC to support Aegis BMD cueing and launch-on and engage-on remote capability.

In support of homeland and regional defense, we continued to sustain AN/TPY-2 operations and supported the deployment of additional AN/TPY-2 radars and the C2BMC infrastructure. For the second AN/TPY-2 radar deployment to Japan, we identified candidate sites, conducted site surveys, selected sites, obtained agreements with the host nation, and initiated site design efforts. We deployed the AN/TPY-2 (Terminal Mode) as part of a THAAD battery in the PACOM Area of Responsibility. Last year we relocated the AN/TPY-2 radar in CENTCOM to a permanent location. Additionally, we accepted the AN/TPY-2 radar Number 8 and provided it to the 3rd THAAD Battery; awarded a production contract for AN/TPY-2 Number 12; awarded a production contract for an additional Prime Power Unit; and awarded a contract for AN/TPY-2 spares.

We request $393 million in FY 2015 to develop and deploy BMDS sensors (includes Long Range Discrimination Radar), and $183 million to operate and sustain the nine AN/TPY-2 radars and support the UEWRs and Cobra Dane radar. We request $444 million in FY 2015 to operate and sustain C2BMC at fielded sites and continue C2BMC program spiral development of software and engineering to incorporate enhanced C2BMC capability into the battle management architecture and promote further interoperability among the BMDS elements, incorporate boost phase tracking,

and improve system-level correlation and tracking. We will also continue communications support for the AN/TPY-2 radars and C2BMC upgrades. We request $31 million for continued operation of the Space Tracking and Surveillance System and Near-Field InfraRed (NFIRE) satellite system in FY 2015. We continue to operate the two STSS-D satellites to conduct cooperative tests with other BMDS elements and demonstrate the capability of the satellites to cue and track against targets of opportunity to provide high precision, real-time tracking of missiles and midcourse objects that enable closing the fire control loops with BMDS interceptors. We also continue to operate the NFIRE satellite, which has the capability to collect near-field phenomenology data for use in developing plume to hard-body handover algorithms for boost phase interceptor programs.

Developing New Capabilities

We are developing fiscally sustainable advanced technology that can be integrated into the BMDS to adapt to threat changes. Our investments are focused on technology that brings upgradeable capability to the warfighter. Our advanced technology investments are determined by systems engineering, which permits us to evaluate and determine which emerging technical solutions will best address gaps in the BMDS and enhance its overall capability and performance. The goal of our technology investment strategy is to deploy a future BMDS architecture more capable of discriminating and killing reentry vehicles with a high degree of confidence, allowing the warfighter to dramatically improve shot doctrine. One of our greatest challenges is the ability to bring multiple sensor phenomenology (i.e., reflective and thermal properties of the missile) into the missile defense architecture. Relying purely on terrestrial radar for

precision tracking and discrimination of the threat is a potential weakness our enemy could exploit in the future. Adding persistent electro-optical sensors to our architecture is a high payoff solution for this gap.

MDA requests $45 million in FY 2015 for Discrimination Sensor Technology. We will integrate advanced sensors on existing unmanned aerial vehicles and demonstrate their ability to create a precision track that shooters can use to target their interceptors quickly and accurately. We will test the first precision track sensors at PMRF this fall. In parallel, we will begin integration and ground test of an advanced sensor upgrade to these precision track sensors with follow-on flight testing in FY 2016. MDA's Discrimination Sensor Technology development and test plan is a cost-effective, stepping stone to MDA's long-term goal of persistent discrimination coverage from a space platform.

Additionally, Air Force Space Command (AFSPC) and MDA are collaborating on future space sensor architecture studies and sensor performance assessments across a broad set of joint mission areas and on Analyses of Alternatives (AoA) studies with threat definition, technical evaluations, and cost analysis support. MDA is supporting AFSPC in its review of concepts that will inform an AoA for the future of protected military satellite communications and overhead persistent infrared systems. As an example, MDA is exploring the potential of BMDS-focused space sensors that also provide data contributing to Air Force missions such as Space Situational Awareness.

MDA requests $14 million in Weapons Technology in FY 2015 to combine the knowledge gained from our Discrimination Sensor Technology effort with our high-power directed energy program to build the foundation for the next-generation laser

system capable of addressing advanced threats and raids at a much lower cost than existing missile interceptors. We are pursuing a unique set of laser technology to execute missile defense missions from high-altitude, low-mach airborne platforms operating in the clear, low turbulence stratosphere. We have been developing two promising solid-state lasers: one at Lawrence Livermore National Laboratory and the other at the Massachusetts Institute of Technology's Lincoln Laboratory collaboratively with the Defense Advanced Research Projects Agency (DARPA). Both lasers achieved record power levels within the last year. MDA will continue high energy efficient laser technology development with the goal of scaling to power levels required for a broad spectrum of speed of light missile defense missions. This year, we are working with several aircraft prime contractors defining concepts for integrating a multi-kW class laser into a mid-altitude, unmanned aerial vehicle. A laser test platform addresses a broad spectrum of mission applications and we will continue our collaboration with our service partners, the Air Force Research Laboratory, and DARPA for joint development and test opportunities.

MDA requests $26 million in FY 2015 for the Common Kill Vehicle (CKV) Technology effort. MDA's strategy is to achieve as much commonality among future GMD kill vehicles and other future kill vehicles for Aegis BMD and THAAD. In FY 2014 this CKV technology effort will help establish the requirements foundation for the redesigned GMD EKV, which we are now planning as the first phase (Phase I) of our overall kill vehicle development strategy. Our FY 2014 joint government and industry concept definition effort will also assess the ability of industry to meet those requirements. In follow-on CKV efforts, or Phase II, we will make investments that

reduce the costs of production and weapon system operations through new kill vehicle architectures and scalable technology that improves the effectiveness and performance of our interceptor fleet against an evolving threat. Our investments in large format focal plane arrays, smaller inertial measurement units and high performance propulsion components as well as new kill vehicle architectures are key enablers. This technology development allows us to engage a more numerous and increasingly more complex threat, eventually establishing the technology foundation for killing multiple lethal objects from a single SM-3 or GBI.

MDA requests $16 million in FY 2015 for the Advanced Research area which conducts leading-edge research and development with small businesses, universities, and international partners to create and advance future missile defense capability. This effort includes managing the Small Business Innovation Research and Technology Applications programs to help MDA-funded small businesses to transition their technology to missile defense applications. MDA is also seeking to leverage the creativity of our nation's universities by sponsoring academic research focused on developing breakthrough capabilities for missile defense.

MDA requests $9 million in FY 2015 for the Advanced Concepts & Performance Assessment effort, which delivers independent assessments of government, university, and industry technology concepts that, along with systems engineering requirements, support acquisition strategy decisions and define our technology focus areas. This effort has greatly improved our assessment of advanced BMD technologies to address evolving threats for the warfighter. We work directly with universities, Federally Funded Research and Development Centers, University Affiliated Research Centers and

innovative small businesses to develop cutting edge data collection, modeling techniques, hardware-in-the-loop, and high performance computing platforms to speed the assessment of innovative technology concepts.

International Cooperation

MDA is engaged with over twenty countries and international organizations, such as NATO. Our major international efforts reflect the Department's goals in the Asia-Pacific, Middle East, and Europe: building partner BMD capacity, supporting the strategic shift to Asia-Pacific, and executing EPAA deployments.

Building Partner BMD Capability

Since I last testified before the committee, we had several successes in our cooperative development programs with our Israeli partners. Through our cooperative efforts, Israel is developing a layered and robust BMD capability. In November 2013 the Israel Missile Defense Organization (IMDO) and MDA achieved a second successful intercept using the David's Sling Weapon System. This past January we successfully conducted the second fly-out of the Arrow-3 upper tier interceptor. These programmatic milestones provide confidence in future Israeli capabilities to defeat the evolving ballistic missile threat in the Middle East. Another recent and significant accomplishment for the Department is the precedent-setting international agreement with Israel regarding coproduction of the Iron Dome missile defense system that was signed on March 5, 2014. The agreement supports increasing U.S. industry co-production of Iron Dome components.

Our largest co-development effort is with Japan on the SM-3 Block IIA interceptor. Japan has committed significant funding for their part of this co-

development project. Japanese and U.S. components will be fully integrated and flight tested in the coming years. The Japanese dedication to this program ensures we will remain on track to deliver SM-3 Block IIA in support of the EPAA Phase 3 in the 2018 timeframe.

After spending a year establishing processes, procedures, and an information technology infrastructure, the Defense Security Cooperation Agency designated MDA a Foreign Military Sales (FMS) Implementing Agency in February 2012 for the THAAD missile defense system and the AN/TPY-2 radar. MDA is currently executing one FMS case with the United Arab Emirates for two THAAD batteries and accompanying launchers, radars, and interceptors. We are actively engaged with several nations, particularly those in the Gulf region, to provide program information and pricing and cost data that may inform future decisions to procure THAAD as an upper tier missile defense capability.

Supporting the Strategic Shift to the Asia-Pacific

As I have already stated, along with the cooperative efforts on the SM-3 Block IIA, the United States and Japan are working together to support the deployment of the second U.S. forward-based AN/TPY-2 radar. Our Japanese partners should be commended for their efforts in supporting this deployment to the Japan Air Self-Defense Force (JASDF) base in Kyogamisaki in southern Japan. This radar will enhance both regional BMD capability and improve defense of the U.S. homeland.

MDA also supported the deployment of a THAAD missile defense system to Guam for the defense of U.S. deployed forces in the region. This is our first long-term deployment of a THAAD battery.

Executing EPAA Deployments

Last October MDA and other Department leaders participated in a ground-breaking ceremony for the Aegis Ashore site in Romania. Site preparation work has started, and we are on schedule with military construction activities demonstrating real steps to deliver EPAA Phase 2 in the 2015 timeframe.

In addition to programmatic planning and deployment activities, MDA is also supporting EUCOM efforts to ensure the necessary Implementing Arrangements are in place to support EPAA fielding timelines. In the near-term, this means coordinating on and, where possible, streamlining the construction, site activation, and equipment acceptance processes in Romania. We are also laying the groundwork for these efforts in Poland. Again, all activities are on track to support the stated EPAA timelines.

We are also working through NATO to ensure U.S. C2BMC and NATO command and control networks are fully interoperable. The United States and NATO test existing and future ballistic missile defense capabilities through a series of ongoing test campaigns in order to evaluate current capabilities and reduce risk for future development.

MDA will continue to engage NATO and regional Allies in support of U.S. national security strategy through international cooperation in missile defense. For instance, the United States is working with NATO on a study to identify cooperative opportunities for European nations to develop and procure missile defense capabilities to complement the U.S. EPAA contribution to NATO BMD.

MDA remains engaged and committed to expanding work with our international partners, to include conducting joint analyses to support partner missile defense

acquisition requirements, cooperative research and development projects, co-development, deployments, FMS, and co-production. It is an honor to work with dedicated international partners on activities that benefit both U.S. and international contributions to missile defense architectures.

Cybersecurity

MDA has been working diligently to enhance the cybersecurity posture of missile defense networks and improve the protection of ballistic missile defense information. MDA has developed new policies, partnered extensively with industry and other Department of Defense organizations, and has continuously increased investments in cybersecurity to ensure our networks and information remain secure against cyber attacks.

I have coordinated policy Memoranda with the DoD Chief Information Officer's office and the Under Secretary of Defense for Acquisition, Technology, and Logistics and signed MDA Policy Memoranda on "Securing Ballistic Missile Defense Information on Government and Non-Government Networks and Systems." These require MDA program executives, program managers, contracting officials, and contractors to follow existing guidelines and implement new cybersecurity measures. We published MDA Manual titled: "Procedures for Protection of Critical Program Information and Mission-Critical Functions and Components within the Missile Defense Agency." We conducted a cybersecurity industry day titled: "The Emerging Role of Cybersecurity in Missile Defense Agency Acquisitions." This served to inform MDA industry partners of new cybersecurity requirements and threats and elicited feedback from industry representatives on how they can meet the new cybersecurity requirements. MDA also

expanded a partnership with DOT&E to test and experiment with cybersecurity on MDA systems. This partnership leverages DOT&E resources and teams MDA with special cyber expertise and extensive knowledge of current threats.

The MDA Computer Emergency Response Team (CERT) performs continuous monitoring of MDA government information systems to protect and defend the confidentiality, integrity and availability of MDA networks and data. MDA is enhancing the established integrated security architecture, aligned to the Defense Enterprise Security Architecture that constantly improves methods to protect, monitor, analyze, detect, and respond to unauthorized activity within MDA information systems. Cyber boundary protection measures include state-of-the-art firewalls, intrusion detection and prevention systems, and email spam/virus prevention capabilities. The Missile Defense Agency will continue to work closely with Federal agencies, industry partners, and others to identify and implement measures to further increase the security of missile defense information while continuously seeking to improve technologies and capabilities that protect MDA critical program information.

I am proud to report we completed our first experiment with DOT&E in February. In the first experiment, MDA successfully demonstrated cybersecurity improvements that are in development. As a result of extensive interactions with a live cyber Operational Force during the first experiment, MDA will pursue new ways to strengthen cybersecurity that will be demonstrated in future experiments.

Conclusion

Mr. Chairman, we have stayed focused on our core mission. We will continue our work with the warfighter to develop, test, and field a networked, global BMD system

that is flexible, survivable, and affordable and invest in promising and potentially game-changing technology programs to ensure the BMDS will be capable of defeating the complex threats we expect to face in the future. In order to ensure we are using the taxpayer's dollars wisely and deploying effective missile defense capabilities, we will continue to test elements of the system to demonstrate that they work before we commit to their fielding. It is vital that we provide the warfighters the cost-effective and reliable weapon systems they need to do their job. I remain dedicated to committing the manpower and resources to correcting the issues in our GMD program, executing a successful intercept flight test this summer, and keeping the focus on reliability in our operational homeland defenses. We continue to make good progress in our work with our international partners, and I want to increase my focus on those important efforts.

I look forward to answering the committee's questions. Thank you.

United States Navy
Biography

Vice Admiral James D. Syring
Director, Missile Defense Agency

Vice Adm. Syring is from Muncie, Ind. A 1985 graduate of the United States Naval Academy with a Bachelor of Science degree in Marine Engineering, he received his commission as an ensign. Subsequent to commissioning, he was designated an engineering duty officer. In 1992, Syring earned his Master of Science degree in Mechanical Engineering from the Naval Post Graduate School.

Ashore, Syring served in numerous engineering duty officer assignments including: ship superintendent for USS *Port Royal* (CG 73); Aegis test officer for new construction DDG 51 class ships; combat systems, test and trials officer in the DDG 51 Aegis Shipbuilding Program Office; Combat Systems Baseline manager in the Aegis Technical Division; director for Surface Combatants, Office of the Assistant Secretary of the Navy (Research, Development and Acquisition). Syring served as the technical director for the U.S. Navy's DDG 1000 Shipbuilding Program and followed that tour as the DDG 1000 major program manager.

Upon selection to flag rank in 2010, Syring served as the program executive officer for Integrated Warfare Systems, responsible for acquiring, developing, delivering and sustaining integrated weapons systems for ships, submarines, carriers and aircraft within the Fleet and Joint Force.

In November 2012, Vice Admiral Syring became the 9th Director of the Missile Defense Agency (MDA), Office of the Secretary of Defense, Pentagon, Washington, DC. In this capacity, he oversees the MDA's worldwide mission to develop a capability to defend deployed forces, the United States, allies, and friends against ballistic missile attacks.

Syring's personal awards include the Distinguished Service medal, Legion of Merit (2 awards), the Meritorious Service medal (4 awards), Navy and Marine Corps Commendation medal, and Navy and Marine Corps Achievement medal.

Updated: 6 March 2014

STATEMENT OF

M. ELAINE BUNN
DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR NUCLEAR AND
MISSILE DEFENSE POLICY
BEFORE THE HOUSE ARMED SERVICES COMMITTEE
MARCH 25, 2014

NOT FOR DISTRIBUTION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE

Introduction

Chairman Rogers, Ranking Member Cooper, and Members of the Subcommittee, thank you for the opportunity to testify in support of the Department's Fiscal Year (FY) 2015 budget request for missile defense. Ballistic missile defense (BMD) is a critical national security priority – both for the homeland and for our ability to project power abroad, prevent and deter conflicts, and defend our deployed forces and allies.

You asked for my assessment of how the programs and fiscal year 2015 budget request for the Missile Defense Agency (MDA) reflect missile defense policy and posture. The President's budget requests $8.5 billion in FY 2015 with $7.5 billion for the MDA to develop and deploy missile defense capabilities that protect the U.S. homeland and strengthen regional missile defenses.

As reflected in the 2014 Quadrennial Defense Review (QDR), which was submitted with the budget request, our top missile defense policy priorities have not changed. The first priority is the defense of the U.S. homeland against the threat of limited ballistic missile attack. We are committed to maintaining an advantageous position compared to the intercontinental ballistic missile (ICBM) threats from North Korea and Iran. This requires continued improvement to the ground-based midcourse defense (GMD) system, including enhanced performance of the Ground-Based Interceptor (GBI) and the deployment of new sensors.

DoD's budget request for FY 2015 also continues to implement regional approaches that are tailored to the unique deterrence and defense requirements of Europe, the Middle East, and Asia-Pacific regions. These regions vary considerably in their geography, history, and character of the threat faced, and in the military-to-military relationships on which we seek to build cooperative missile defenses. Our focus is on developing and fielding capabilities that are mobile and capable of being redeployed to different locations as necessary to address the threat. We are also encouraging our allies and partners to acquire missile defenses, and we are working to strengthen missile defense cooperation that can contribute to significantly increased performance than individual countries can achieve on their own.

I will begin with a discussion of ballistic missile threat and trends, and then focus on our progress on three key policy priorities: sustaining a strong homeland defense, strengthening regional missile defense, and fostering increased international cooperation and participation.

Ballistic Missile Threats and Trends

Ballistic missiles are becoming more survivable, reliable, and accurate at greater ranges. Regional powers are basing more missiles on mobile platforms at sea and on land. Technical and operational measures to defeat missile defenses also are increasing. China, Iran, and North Korea, for example, exercise near simultaneous salvo firings of short- and medium- range

ballistic missiles from multiple locations to saturate regional missile defenses. Countries are designing missiles to launch from multiple transporters against a broad array of targets, enhancing their mobility and effectiveness on the battlefield. Shorter launch-preparation times and smaller footprints are making new systems more survivable.

Iran

Iran already has the largest inventory of ballistic missiles in the Middle East, and today can strike targets throughout the region and into Eastern Europe. In addition to its growing missile inventories, Iran is seeking to enhance lethality and effectiveness of existing systems with improvements in accuracy and warhead designs. Iran is developing an anti-ship ballistic missile which could threaten maritime activity throughout the Persian Gulf and Strait of Hormuz. While Iran has not yet deployed an ICBM, its progress on space launch vehicles—along with its desire to deter the United States and its allies—provides Tehran with the means and motivation to develop longer-range missiles, including an ICBM.

Although we do not know if Iran will eventually decide to build nuclear weapons, Iran has developed technical expertise in a number of areas – including uranium enrichment, nuclear reactors, and ballistic missiles – from which it could draw if it decided to build missile-deliverable nuclear weapons.

Syria

While Syria does not pose a ballistic missile threat to the U.S. homeland, the Assad regime does possess short-range ballistic missiles, and has shown a willingness to use them repeatedly against its own people. Syria has several hundred short-range ballistic missiles, all of which are mobile and can reach much of Israel and large portions of Iraq, Jordan, and Turkey from launch sites well within the country.

North Korea

North Korea's weapons and missile programs pose a serious threat to the United States and to East Asia. North Korea has conducted three nuclear tests. It also is seeking to develop longer-range ballistic missiles capable of delivering nuclear weapons to the United States, and continues efforts to bring its KN08 road mobile ICBM, which it paraded most recently in July 2013, to operational capacity. While the reliability of an untested North Korean ICBM is likely to be very low, North Korea has used its Taepo-Dong-2 launch vehicle to put a satellite in orbit, thus successfully demonstrating technologies applicable to a long-range missile.

North Korea's efforts to produce and market ballistic missiles raise broader regional and global security concerns, by threatening the United States' allies and partners and increasing our concerns about ballistic missile technology proliferation.

China

In the regional ballistic missile context, China is augmenting the over 1,200 conventional short-range ballistic missiles with a limited but growing number of conventionally armed, medium-range ballistic missiles that will improve China's ability to strike regional targets. China also continues to deploy growing numbers of anti-ship ballistic missiles.

Homeland Defense

The U.S. homeland is currently protected against potential limited ICBM attacks from states like North Korea and Iran by the GMD system. This system consists of GBIs, land-based early-warning radars, sea-based radar systems, and a sophisticated command and control architecture.

The Department of Defense is implementing steps to strengthen the U.S. homeland missile defense posture as announced by Secretary Hagel in March of last year. The refurbishment of Missile Field 1 at Fort Greely, Alaska, is underway and the budget includes funding for the acquisition of GBIs to support GMD operations, testing, and spares, and emplacement of additional GBIs in Missile Field 2 as we progress toward 44 deployed interceptors by the end of 2017. Secretary Hagel also announced the deployment of a second AN/TPY-2 radar in Japan. This deployment will provide improved early warning and tracking of missiles launched from North Korea at the United States as well as its regional allies and partners. We remain on track to complete deployment of this capability by the end of the year.

The President's budget request also includes funding to initiate the redesign of the Exoatmospheric Kill Vehicle (EKV). The redesigned EKV, in essence a next-generation kill vehicle, will not only improve the reliability and performance of the GBI, but by being designed to allow for a more standardized production process, the kill vehicle should also be easier to build, upgrade, and maintain than the previous versions. This investment in the next generation kill vehicle for the GBI is especially important considering the test problems associated with the Capability Enhancement-II (CE-II) version of the kill vehicle. Although we are committed to ensuring the effectiveness of the current kill vehicle through testing; we are also pursuing a redesigned kill vehicle that will improve the reliability and effectiveness of the GMD system.

The submitted budget also includes funding for development of a Long Range Discrimination Radar (LRDR). This radar will provide persistent sensor coverage and improve discrimination capabilities against threats to the homeland from North Korea and will provide the Sea-Based X-band (SBX) radar more geographic deployment flexibility for contingency and test use.

We are also requesting funding to improve the discrimination capabilities of the existing GMD system. These investments will lead to a GMD system more capable of discriminating and destroying reentry vehicles with a high degree of confidence and will improve the efficiency and effectiveness of our homeland missile defenses.

As directed by Congress, the Missile Defense Agency is also currently evaluating four potential locations for an additional GBI site in the continental United States. An additional missile field in the Eastern portion of the United States would increase the overall survivability of the GMD system, provide more time to conduct missile defense engagements, and would allow for the deployment of additional interceptors.

That said, the cost of building an additional missile defense site in the United States is very high. Given that the ICBM threat from Iran has not yet emerged, and due to the recent test failures associated with the current GBI kill vehicles, the highest priorities for the protection of the homeland are in improving the reliability and effectiveness of the GBI and improving the GMD sensor architecture. The current GMD system provides coverage of the entire United States from North Korean and potential Iranian ICBMs. No decision has been made to deploy an additional missile field in the United States. If an ICBM threat were to emerge in numbers that necessitated the deployment of additional interceptors, the steps being taken now, to include conducting an environmental impact statement, will shorten the construction timelines associated with deployment of a new missile defense site.

Regional Missile Defense

The Department's budget request for FY 2015 also continues to implement regional approaches that are tailored to the unique deterrence and defense requirements of Europe, the Middle East, and Asia-Pacific regions.

Europe

We are continuing to implement the European Phased Adaptive Approach (EPAA), and we are working in close collaboration with our NATO Allies to develop an advanced network of sensors and interceptors – on land and at sea – to protect NATO European territory and our forces and military facilities.

The United States has operated a forward-based radar in Turkey and maintained a sea-based missile defense presence in Europe since 2011. The Standard Missile (SM)-3 Block IB was deployed on Aegis BMD ships as an operational interceptor for the first time in 2013. The Block IB version of the interceptor uses an improved seeker and signal processor that allows for greater on-board discrimination and area coverage than the SM-3 IA. In October of 2013, a ground-breaking ceremony was held at the land-based SM-3, or Aegis Ashore, site in Romania. The site is planned to be operational by the end of 2015.

We have also taken steps to meet the requirement for sea-based BMD capabilities by establishing a home-port for four U.S. Aegis BMD destroyers at the naval facility at Rota, Spain. These multi-mission ships will support the missile defense mission, as well as other U.S. European Command and NATO maritime missions. The first of the four ships to be stationed at Rota, USS

DONALD COOK, has already deployed to Europe, and the USS ROSS will arrive this summer. The final two ships, the USS CARNEY and USS PORTER, will arrive in 2015.

The President's budget request also supports the Aegis Ashore site that will be deployed in Poland in the 2018 timeframe and the development of the SM-3 Block IIA interceptor that will be deployed on land and at sea. These capabilities will extend coverage to all NATO European countries.

As Secretary Hagel emphasized in his announcement in March of last year, our commitment to NATO missile defense "remains ironclad" as demonstrated by our strong support for the BMD capabilities either already deployed, or being developed for Phases 1 through 3 of the EPAA.

Our NATO Allies are also making significant contributions to the European missile defense mission. Romania, Spain, and Turkey are hosting U.S. missile defense assets and provide the external security for the facilities. Beyond hosting the second Aegis Ashore site in Europe, Poland has also announced its intention to spend up to $10 billion to acquire increased air and missile defense capabilities. DoD is engaging directly with Poland to assist in the development of its missile defense requirements and is promoting U.S. systems to meet these requirements.

Several Allies have modern surface combatant ships that could be equipped with a BMD sensor or interceptor capability. The United States will continue to encourage its NATO Allies to do even more to cooperate and invest in missile defenses that will contribute to Alliance security.

The Netherlands has committed to spend up to 250 million Euro to upgrade the SMART-L radars on four of their frigates and it, along with Germany, has committed Patriot PAC-3 systems to NATO missile defense as demonstrated through the ongoing NATO deployment in defense of Turkey.

France is planning to provide its Spirale satellite detection system and a long-range radar for NATO territorial missile defense and has contributed the SAMP/T air and missile defense system, which became operational in 2013, to NATO BMD. Despite the U.S. decision to forgo production of the Medium Extended Air Defense System (MEADS), development will be completed in 2014. Germany and Italy are considering the system a possible future national contribution to NATO BMD.

The United States conducts exercises designed to hone our Alliance missile defense capabilities. U.S. European Command (USEUCOM) is engaged with NATO in the development of a biennial NATO-led BMD exercise event that serves to reinforce and expand upon other, routine BMD training evolutions that take place on a quarterly and semi-annual basis.

Many NATO Allies also participate in NIMBLE TITAN, a series of exercises designed to understand how the missile defenses of many participant can work together in a crisis or conflict.

The NIBLE TITAN 14 campaign, which began last year with regional tabletop exercises, has 21 participant nations, and NATO participates as an alliance. The final exercise of NIMBLE TITAN 14 is a capstone event that will take place in April involving all participants in a cross-regional wargame.

Asia-Pacific

The cornerstone of our security and diplomacy in the region has been our strong bilateral alliances, including with South Korea, Japan, and Australia. All three of these nations play an important role in our regional efforts to achieve effective missile defense.

South Korea obviously has an immediate, proximate stake in preventing missile strikes from North Korea. We have worked very closely with South Korea to ensure that our Alliance maintains the capacity to do just that. The United States deploys Patriot PAC-3 batteries in South Korea to defend U.S. and South Korean forces. In addition, South Korea is taking steps to enhance its own air and missile defense systems, which include sea- and land-based sensors and Patriot PAC-2 batteries. DoD has been consulting closely with South Korea about how it can upgrade its missile defense capabilities and we are mutually committed to sustain and strengthen protection against the North Korean missile threat.

Japan has its own layered missile defense system, which includes Aegis BMD ships with Standard Missile-3 interceptors, PAC-3 batteries, early-warning radars, and sophisticated command-and-control systems. Japan is upgrading two ATAGO-class Aegis destroyers to BMD capability with certification scheduled for FY 2018 and FY 2019 and has recently expressed interest in purchasing two additional Aegis BMD ships, which would increase its inventory to a total of eight BMD-capable ships. As mentioned earlier, Japan also hosts a U.S. missile defense radar and has agreed to host a second radar.

Japan is also a critical international partner for BMD development. One of our most significant cooperative efforts is the co-development of an advanced version of the SM-3 interceptor, the SM-3 Block IIA.

The United States and Australia have forged a long-standing partnership on missile defense research and development – most notably with regard to sensors. In addition, Australia is involved in a trilateral discussion on missile defense in the Pacific involving the United States, Australia, and Japan.

Going forward, we will continue to emphasize the importance of developing a regional ballistic missile defense system that includes the sharing of sensor data among Allies.

Middle East

The United States maintains a strong defense relationship with Israel, and our cooperation on missile defense has resulted in a comprehensive missile defense architecture. Israeli programs

such as Iron Dome, the David's Sling Weapon System, and the Arrow Weapon System, in conjunction with operational cooperation with the United States, create a multi-layered architecture designed to protect the Israeli people from varying types of missile threats. Missile defense figured prominently in the AUSTERE CHALLENGE exercise we conducted with Israel in the fall of 2012, the largest U.S.-Israeli military exercise in history. A similar exercise, JUNIPER COBRA, is scheduled to take place in May of this year.

The United States is also working with a number of Gulf Cooperation Council (GCC) countries on missile defense, including supporting the purchase of missile defense systems through the Foreign Military Sales program. The United Arab Emirates is procuring the Terminal High Altitude Area Defense (THAAD) system, with the first delivery expected next year. This is in addition to the UAE's earlier purchase of Patriot systems, which have been delivered. Saudi Arabia is in the process of upgrading its existing Patriot PAC-2 batteries to the PAC-3 configuration. Kuwait is also purchasing Patriot PAC-3 batteries.

U.S. Air Force Central Command maintains a series of regular exchanges between United States and GCC air defense officers at the Combined Air Operations Center located at Al Udeid Air Base in Qatar. These exchanges provide an opportunity for increased situational awareness of missile threats in the region as well as the potential for future BMD planning and operational cooperation.

As the GCC states begin to field more capable systems, the United States and its Gulf partners must work toward greater integration of those capabilities across the region. The desired end state is a regional missile defense architecture in which GCC member states participate and contribute to the extent practical, leading to a networked, layered defense of key strategic centers that strengthens deterrence and increases our collective ability to defeat a ballistic missile attack.

Russia

This Administration, in keeping with previous Administrations, has sought cooperation with Russia on missile defense. Genuine missile defense cooperation would be in the security interests of all parties by strengthening the defensive capabilities of the United States, NATO, and Russia. It would also help to remove missile defense as a source of tension in the bilateral relationship, and send a powerful signal to potential adversaries that ballistic missile threats will be ineffective as a tool of coercion.

The United States has pursued missile defense cooperation with Russia with the clear understanding that we will not accept constraints on our missile defense systems, we will implement the EPAA, and Russia will not have command and control over the ballistic missile defense of NATO territory.

The United States has been open and transparent with Russia about our plans for European missile defenses, and explained in detail why U.S. missile defense systems in Europe will not negate the Russian strategic nuclear deterrent. We have made a number of proposals that would have laid the groundwork for meaningful cooperation, including a proposal to establish missile defense cooperation centers in Europe, and more recently, a proposal that would provide for reciprocal transparency about our respective missile defense plans and programs. These proposals would allow for the better understanding of the purpose of our missile defenses and for predictability about our missile defense plans for the future.

Russia has not reacted positively to the U.S. proposals and has instead continued to seek legally-binding restrictions and limitations on our missile defense deployments to Europe. In the course of our bilateral dialogue, we have continuously rejected any limitations on our missile defenses. Our missile defense deployments to Europe address the regional ballistic missile threat posed by Iran and Syria, and cannot be subject to limits imposed by a third party.

Russia's intervention into the crisis in Ukraine, in violation of international law, led to the suspension of our military to military dialogue and we have not continued to engage Russia on the topic of missile defense. As Russia's violation of international law continues, we will review any future bilateral engagements on missile defense to ensure that they are in the security interests of the United States and our allies.

Conclusion

The ballistic missile threat – to the United States, to our Allies and partners, and to our forces overseas – is evolving, and we continue to grow and adapt our homeland and regional missile defense posture and international cooperation to address it.

We have had some very significant progress over the last several years, but this Administration has emphasized from the beginning that we cannot afford to stand still. The President's budget request for FY 2015 reflects DoD's goals of retaining the flexibility to adjust, and to enhance our defenses as the threat and technologies evolve. Missile defense is crucial to maintaining our most vital security commitments – the defense of the United States and the protection of our allies and partners and our forces around the world.

I want to thank you for having me here today, and I look forward to your questions.

M. Elaine Bunn
Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy

As Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy (DASD/NMD), appointed 22 March 2013, M. Elaine Bunn directs the offices of the Under Secretary for Policy that develop and review Departmental and National policies for nuclear and missile defense capabilities. These responsibilities include defining requirements for future capabilities, reviewing and adjusting operational planning, and leading discussions to develop strategies and options with allies and friends as well as international cooperation or agreements in the areas of nuclear forces, global strike and missile defense.

Prior to being appointed DASD/NMD, Bunn was a Distinguished Research Fellow in the Center for Strategic Research at National Defense University's Institute for National Strategic Studies, where she headed a project on future strategic concepts.

Before joining INSS in 2000, she was a senior executive in the Office of the Secretary of Defense (OSD), where she worked for twenty years in international security policy. She served as Principal Director, Nuclear Forces and Missile Defense Policy, from 1993-98. During that time, she was executive director of the 1994 Nuclear Posture Review. Her other assignments in OSD included the offices of Strategic Defense Policy, Strategic Arms Control Policy, and Theater Nuclear Forces Policy. She began her DoD career as a Presidential Management Intern in 1980-82, with a number of rotational tours, including at the State Department. Bunn was a visiting fellow at the RAND Corporation 1998-2000. From February through June 2001, she cochaired a panel for the Secretary of Defense, framing issues for the 2001 Nuclear Posture Review. She was again seconded to OSD in April-May 2009 to chair the strategy panel for the 2010 Nuclear Posture Review. She served on the Defense Science Board's 2003 study on strategic strike, and on an expert working group of the Commission on Strategic Posture in 2008-09.

In the 1970's, she served as a research assistant at the U.S. Arms Control and Disarmament Agency and at the Congressional Research Service, as well as a staff analyst for the Lieutenant Governor of Georgia and an intern for U.S. Senator Sam Nunn.

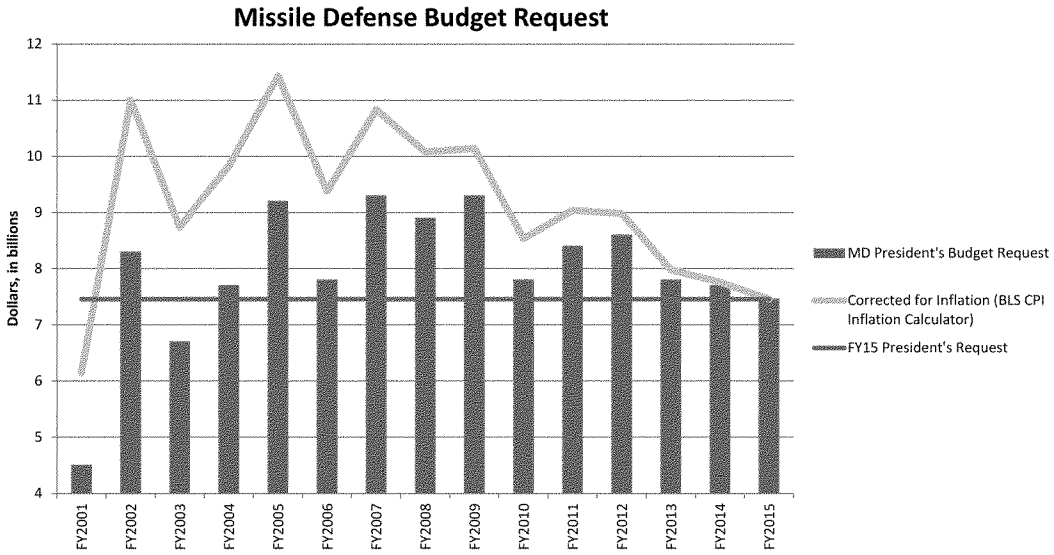
Bunn, a 1988 graduate of the National War College, received an M.A. in International Security from Johns Hopkins School of Advanced International Studies in 1980. She was a Fulbright Scholar at the Université de Neuchâtel, Switzerland in 1974-75, after graduating from the University of Georgia with a B.A. in International Political Communications. She currently serves on the Board of Visitors for the School of Public and International Affairs at the University of Georgia, as Chair of the Board of Advisors for the CSIS Project on Nuclear Initiatives (PONI), and as a Senior Mentor for the Project for Emerging Leaders at the Center for the Study of Weapons of Mass Destruction. She was awarded the Defense Medal for Distinguished Civilian Service in 1995, and the Medal for Meritorious Civilian Service in 1989 and 1993.

She has published a number of articles and book chapters on deterrence, assurance of allies, strategic planning, nuclear policy, missile defense, and preemption, and has spoken frequently on these issues at U.S. and international conferences.

DOCUMENTS SUBMITTED FOR THE RECORD

MARCH 25, 2014

The FY15 budget request for missile defense represents the smallest missile defense budget request since Bill Clinton was President.



The Washington Post

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President Obama's foreign policy is based on fantasy

By Editorial Board, Published: March 2

FOR FIVE YEARS, President Obama has led a foreign policy based more on how he thinks the world should operate than on reality. It was a world in which "the tide of war is receding" and the United States could, without much risk, radically reduce the size of its armed forces. Other leaders, in this vision, would behave rationally and in the interest of their people and the world. Invasions, brute force, great-power games and shifting alliances — these were things of the past. Secretary of State John F. Kerry displayed this mindset on ABC's "This Week" Sunday when he said, of Russia's invasion of neighboring Ukraine, "It's a 19th century act in the 21st century."

That's a nice thought, and we all know what he means. A country's standing is no longer measured in throw-weight or battalions. The world is too interconnected to break into blocs. A small country that plugs into cyberspace can deliver more prosperity to its people (think Singapore or Estonia) than a giant with natural resources and standing armies.

Unfortunately, Russian President Vladimir Putin has not received the memo on 21st-century behavior. Neither has China's president, Xi Jinping, who is engaging in gunboat diplomacy against Japan and the weaker nations of Southeast Asia. Syrian president Bashar al-Assad is waging a very 20th-century war against his own people, sending helicopters to drop exploding barrels full of screws, nails and other shrapnel onto apartment buildings where families cower in basements. These men will not be deterred by the disapproval of their peers, the weight of world opinion or even disinvestment by Silicon Valley companies. They are concerned primarily with maintaining their holds on power.

Mr. Obama is not responsible for their misbehavior. But he does, or could, play a leading role in structuring the costs and benefits they must consider before acting. The model for Mr. Putin's occupation of Crimea was his incursion into Georgia in 2008, when George W. Bush was president. Mr. Putin paid no price for that action; in fact, with parts of Georgia still under Russia's control, he was permitted to host a Winter Olympics just around the corner. China has bullied the Philippines and unilaterally staked claims to wide swaths of international air space and sea lanes as it continues a rapid and technologically impressive military buildup. Arguably, it has paid a price in the nervousness of its neighbors, who are desperate for the United States to play a balancing role in the region. But none of those neighbors feel confident that the United States can be counted on. Since the Syrian dictator crossed Mr. Obama's red line with a chemical weapons attack that killed 1,400 civilians, the dictator's military and diplomatic position has steadily strengthened.

The urge to pull back — to concentrate on what Mr. Obama calls "nation-building at home" — is nothing new, as former ambassador Stephen Sestanovich recounts in his illuminating history of U.S. foreign policy,

"Maximalist." There were similar retrenchments after the Korea and Vietnam wars and when the Soviet Union crumbled. But the United States discovered each time that the world became a more dangerous place without its leadership and that disorder in the world could threaten U.S. prosperity. Each period of retrenchment was followed by more active (though not always wiser) policy. Today Mr. Obama has plenty of company in his impulse, within both parties and as reflected by public opinion. But he's also in part responsible for the national mood: If a president doesn't make the case for global engagement, no one else effectively can.

The White House often responds by accusing critics of being warmongers who want American "boots on the ground" all over the world and have yet to learn the lessons of Iraq. So let's stipulate: We don't want U.S. troops in Syria, and we don't want U.S. troops in Crimea. A great power can become overextended, and if its economy falters, so will its ability to lead. None of this is simple.

But it's also true that, as long as some leaders play by what Mr. Kerry dismisses as 19th-century rules, the United States can't pretend that the only game is in another arena altogether. Military strength, trustworthiness as an ally, staying power in difficult corners of the world such as Afghanistan — these still matter, much as we might wish they did not. While the United States has been retrenching, the tide of democracy in the world, which once seemed inexorable, has been receding. In the long run, that's harmful to U.S. national security, too.

As Mr. Putin ponders whether to advance further — into eastern Ukraine, say — he will measure the seriousness of U.S. and allied actions, not their statements. China, pondering its next steps in the East China Sea, will do the same. Sadly, that's the nature of the century we're living in.

Read more: David Ignatius: Putin makes a catastrophic error Charles Krauthammer: Putin's Ukraine gambit Editorial: Spell out the consequences for Russia's invasion of Ukraine Eliot Cohen: The West must counter Putin's power play Michael Singh: How the U.S. has made Ukraine and Syria's crises worse Serhy Yekelchyk: In Ukraine, Lenin finally falls David J. Kramer: U.S. foreign policy comes home to roost with Russia's action in Ukraine

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING

MARCH 25, 2014

RESPONSE TO QUESTION SUBMITTED BY MR. BROOKS

Admiral SYRING. In fiscal year (FY) 2015, the Department of Defense is requesting $1.003 billion (B) for Ground-based Midcourse Defense (GMD) Research, Development, Test and Evaluation activities, and $146 million for GMD operations and maintenance for a total of $1.149B in FY 2015. Over the Future Years Defense Program, when GMD procurement, the Sea-based X-Band Band Radar, and the planned procurement of the long-range discrimination radar are included the total budget from FY2015 to 2019 is $7.048B. [See page 19.]

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MARCH 25, 2014

QUESTIONS SUBMITTED BY MR. ROGERS

Mr. ROGERS. Have you been briefed on Russia's missile defense capabilities? Do you believe Russia intends for them be used against U.S. missiles?

General MANN. I am familiar with intelligence assessments of Russia's missile defense capabilities. Russia's missile defense capabilities consist of both fixed and mobile systems. Current fixed ballistic missile defense systems are designed to counter an intercontinental ballistic missile force and would be employed to defend major population centers around Moscow. Russia also maintains a mobile ballistic missile force designed to defend against shorter range tactical ballistic missile systems.

Just as ballistic missile defense is an integral part of U.S. military strategy, I believe that Russia maintains ballistic missile defensive capabilities for similar reasons. When under the threat of a ballistic missile attack by any nation, including the United States, Russia must be expected to employ its defensive capabilities to protect its interests.

Mr. ROGERS. What would you worry about if Turkey acquired a Chinese missile defense system? Why would you not want that system to be connected or networked with U.S. systems? What if the system was established as an "indigenous" system, but clearly was comprised of Chinese technology and systems?

General MANN. The Department is committed to the deployment of Ballistic Missile Defense System assets that enhance missile defense capabilities within the European region and the NATO missile defense initiative. If Turkey acquires a Chinese missile defense system, my concern is its impact to our coalition operations and the compatibility between our forces. Efforts continue to ensure future interoperability of U.S. contributions to the NATO capability. However, it is the Department's position that the Chinese missile defense system cannot be interoperable with NATO due to the potential risks and vulnerabilities associated with either the Ballistic Missile Defense System or the NATO missile defense initiative.

Mr. ROGERS. The National Missile Defense Policy Act of 1999 requires that we deploy national missile defenses capable of defending the United States from "accidental or unauthorized" ballistic missile attack, among other attacks. Can you please tell me, are we protected from an accidental or unauthorized ballistic missile attack from a Chinese ballistic missile submarine, which, as you know, the Chinese are now deploying? If not, when will we?

General MANN. It is difficult to provide a specific assessment. The Ballistic Missile Defense System is not designed to counter peer or near-peer ballistic missile threats. The level of residual capability to defend against such an incident would be influenced by the degree of indications and warnings, the location of the launch and target impact area, and the accessibility of sensors and interceptors. Upon request, further details could be provided via a classified session or paper.

Mr. ROGERS. Please switch hats to your hat as Commander of Army Space and Missile Defense Command. Why is the Conventional Prompt Global Strike capability important?

I understand the Navy is evaluating the basing of such a capability on submarines. Do you support such studies? How would SMDC remain involved during such consideration?

General MANN. An operational Conventional Prompt Global Strike (CPGS) system would provide the National Command Authority a conventional munitions capability to address strategic and time sensitive targets in areas without forward deployed forces. I support OSD's continued effort to develop and field a CPGS capability. Per OSD's direction and guidance, I anticipate that USASMDC/ARSTRAT will continue to support technology development as the CPGS capability matures.

Mr. ROGERS. Two administrations, including the current one, supported forward-deployed missile defense sites in Poland to provide added and needed protection of the homeland. Those homeland defense deployments have now been cancelled. Have we replaced them in any way?

What could an East Coast missile defense site provide you to defend the United States?

Why is it important to continue planning for such a deployment?

General Mann, as the warfighter, do you have an opinion?

General MANN. As outlined by the Secretary of Defense in March 2013, steps were taken to bolster homeland defense. The Department is increasing capacity and capability to its homeland defense architecture with the programmed increase of 14 additional Ground-based Interceptors as well as the development of advanced kill vehicle

technology. These initiatives and Missile Defense Agency's design and development of a Long Range Discrimination Radar will serve to provide an enhanced level of protection against a limited ballistic missile defense attack.

While a decision to deploy a third interceptor site on the U.S. East Coast has not been made, an operational site would disperse inventory and increase both ground based interceptor capacity and battlespace, e.g., provide more decision time. While a third site does provide enhanced homeland defense capabilities, it is not the top operational priority. Improving our sensor capabilities, to include persistent discrimination and enhanced tracking of threat missiles, as well as improving the ground based interceptor reliability are higher ranking Warfighter priorities.

In my opinion, it is prudent for the Missile Defense Agency to complete the environmental impact statements at the four potential U.S. interceptor sites, which will reduce the operational timeline in the event the Nation decides to field a third site.

Mr. ROGERS. Are you developing missile defenses to defend the Navy, in particular our carrier battle groups, from China's "carrier killer" ballistic missile (known as the DF–21D)?

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. ROGERS. It appears the fiscal year 2014 budget request cuts your directed energy budget to approximately $13 million. Can you tell me, is this a sufficient budget request in your opinion? Does this budget request match the potential for directed energy to be a game-changing missile defense technology? How much of this program's budget request is focused on missile kill or intercept?

Admiral SYRING. All of MDA's budget request for directed energy is focused on missile kill or intercept. MDA fully supports the PB15 President's Budget request for Directed Energy. Funding at the requested level is sufficient and matches the potential for directed energy to be a game-changing missile defense technology by supporting the key demonstrations for two promising directed energy technologies, Diode Pumped Alkali Lasers at LLNL and Fiber Combining Lasers at MIT/LL.

We will base our PB16 budget submission on data and progress of these two demonstration programs. Both laboratories achieved record high output powers (20 kW for MIT/LL and 4 kW for LLNL) for their respective technologies this past year. Each program is now progressing towards higher power demonstrations to satisfy MDA's knowledge point objectives. We are canvassing industry for both near-term and far-term directed energy solutions. We are requesting industry proposals under MDA's Advanced Technology Initiatives Broad Agency Announcement for an airborne demonstration of a multi-kilowatt-class laser. The near-term demonstration will reduce risk for a full scale system capable of killing a missile. Additionally, there are multiple uses for this technology at lower power levels.

Mr. ROGERS. Have you been briefed on Russia's missile defense capabilities? Do you believe Russia intends for them be used against U.S. missiles?

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. ROGERS. You stated at the hearing that the question of the advisability of the release to Russia of velocity-at-burnout data "gets to methods and means of employment that could be derived from such equations." Please elaborate, including by classified response if necessary.

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. ROGERS. I support the additional funding in the GMD program that you've requested for a new redesigned kill vehicle and new investments in discrimination. Absent those investments, however, the GMD system is actually being cut in your fiscal year 2015 budget. Why? In other words, this budget is requiring GMD to do much more but without an adequate topline increase.

Admiral SYRING. Excluding discrimination improvements for Homeland Defense and redesigned Exoatmospheric Kill Vehicle, the GMD "program specific" FY 2015 funding was reduced from President's Budget (PB) 2014 to PB 2015 to provide funding for additional Homeland Defense discrimination capabilities and long-range radar capabilities funded in other Agency program elements which will enhance the capability of the GMD system.

Mr. ROGERS. Are we making sufficient investments to pay for life-cycle maintenance and aging and reliability for this 10-year-old system, which, as you know, was deployed with a 20-year design life?

Admiral SYRING. The FY 2015 budget request supports sustainment of the GMD program. The Missile Defense Agency (MDA) acknowledges the need to look into all aspects of the GMD program to include life-cycle maintenance, aging and reliability and is prioritizing requirements and funding within available resources during the FY 2016 budget development process.

Mr. ROGERS. What investments do we need to make?

Admiral SYRING. [The information referred to is for official use only, and is retained in the committee files.]

Mr. ROGERS. The missile defense budget request includes $175 million to conclude the Iron Dome agreement with Israel. I also understand the Israelis are requesting a $176 million plus-up for Iron Dome for fiscal year 2015. Do you support this plus-up?

Admiral SYRING. The Missile Defense Agency (MDA) supports the President's fiscal year 2015 budget request of $176 million. We believe the Israeli request for additional funds is premature.

Since contracts for the production and U.S. co-production for Iron Dome are awarded by Israel, MDA has no privity of contract associated with U.S. co-production of Iron Dome components. However, MDA is aware that no co-production contracts between U.S. and Israeli industry have been awarded. Therefore, there is nothing to substantiate the Israeli claim of a higher U.S. industry production cost and higher non-recurring engineering costs.

U.S. and Israeli industry are finalizing a teaming agreement covering co-production of Iron Dome components. MDA understands that this agreement will contain language that indicates U.S. industry costs will not exceed Israeli industry costs by five percent on any component; otherwise procurement of that component would revert to Israeli industry. U.S. industry believes that it can demonstrate the ability to meet cost targets for nearly all Iron Dome components once contracts are awarded.

Finally, the Israeli assertion that the U.S.-Israeli currency exchange rate necessitates additional funding is counter to the Department of Defense Financial Management Regulation. It is not feasible to continually adjust international agreements based on a fluctuating currency exchange rate.

Mr. ROGERS. What would you worry about if Turkey acquired a Chinese missile defense system? Why would you not want that system to be connected or networked with U.S. systems? What if the system was established as an "indigenous" system, but clearly was comprised of Chinese technology and systems?

Admiral SYRING. The possibility of Turkey acquiring a Chinese made missile defense system is a concern. In our opinion, without full technical insight, NATO will not likely allow the Chinese system to be connected to the NATO BMD system due to concerns about cyber-related issues that stem from the possibility of a Chinese system connecting to a NATO system.

Even if the Turks acquire an "indigenous" system that is clearly comprised of Chinese technology and systems, without full technical insight, we believe that it will still not likely meet the strict standards that are required to be connected to the NATO system.

Mr. ROGERS. The budget proposal for Fiscal Year 2015 includes a proposal that MDA assume responsibility as the technical authority for Integrated Air and Missile Defense programs. Can you please describe how this will occur and why it was necessary, from your perspective?

Can you please, with this technical authority, provide your views on the utility of the Air Force's 3DELRR system and whether other planned service systems can perform this mission?

Admiral SYRING. On October 1, 2013, the Missile Defense Agency (MDA) was assigned responsibility as the single technical authority for integrated air and missile defense (IAMD). We will leverage the MDA system engineering process as described in BMDS Systems Engineering Plan. We will lead and manage engineering activities in collaboration with the Services in a Joint Systems Engineering Team chaired by MDA. This team will provide recommended technical requirements for inclusion in the IAMD technical baseline which includes related specifications and interface control documentation. The Services will continue to maintain configuration control over their Service-specific baselines and will ensure that those baselines reflect requirements defined by the IAMD technical authority.

The Department of Defense has been developing air and missile defense capabilities for more than two decades; however, the development of a joint force that can operate in an integrated and interoperable manner has not been realized due to the challenges associated with the integration. A single authority for the development of technical requirements and coordinated development of air and missile defense solutions will enhance the DOD's ability to integrate across the Military Departments.

The Air Force's 3DELRR system provides surveillance capability that can contribute to the future air picture and track air breathing targets. MDA's focus to date has been on assessing options for integrating sensors across the Services by using Service descriptions and data for each of the sensors.

Mr. ROGERS. Can you please describe the planning and evaluation that is underway to consider whether any of the 14 GBIs that will be procured starting next year will be two-stage GBIs?

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. ROGERS. Your predecessor, General O'Reilly, testified in 2009 that MDA was going to deploy 30 GBIs and it was going to continue the production of 14 GBIs on contract to maintain the ability to produce additional GBIs for testing, refurbishment, future upgrades, etc. We support the Department's decision to now deploy those 14 GBIs in response to the North Korean threat, but what about testing, refurbishment, and future upgrades of the currently deployed systems? Is that funded in the FY15 budget request?

Admiral SYRING. Yes, the President's Budget 2015 request funds testing, refurbishment, and future upgrades of the Ground-Based Interceptors (GBIs). The budget request funds GBI component testing and refurbishing currently deployed GBIs to test and improve their reliability including specific upgrades to the fleet to correct issues identified with the FTG–06a flight test failure. It also funds a total of six GBI intercept flight tests from fiscal years (FY) 2015–2019, maintaining a test cadence of at least one flight test per year of the Ground-Based Midcourse Defense system.

We have also requested $99.5 million in FY 2015 to redesign and improve the GBI exoatmospheric kill vehicle (EKV). The redesigned EKV will be built with a modular, open architecture and designed with common interfaces and standards, making upgrades easier and broadening our vendor and supplier base. The new EKVs will improve reliability and be more producible, testable, reliable, and cost-effective and eventually will replace the kill vehicle on our current GBI fleet. We are currently assessing concepts, acquisition options, and timelines to test and field the redesigned EKV. Our goal is to begin flight testing the redesigned EKV in FY 2018.

Mr. ROGERS. Can you please shed light on whether MDA is still considering multiyear procurement or other efficient procurement processes and authorities for procuring these GBIs? How much money could be saved from such procurement approaches?

Admiral SYRING. Given the status of the GBI flight test program, I believe multiyear procurement authority is premature at this time. The Missile Defense Agency's (MDA) President's Budget 2015 request includes $150 million beginning in fiscal year (FY) 2016 for the procurement of Ground Based Interceptors (GBI). We are evaluating various procurement approaches that could potentially result in substantial savings over the Future Year's Defense Program; however, it is too early for us to identify potential cost savings.

Mr. ROGERS. The National Missile Defense Policy Act of 1999 requires that we deploy national missile defenses capable of defending the United States from "accidental or unauthorized" ballistic missile attack, among other attacks. Can you please tell me, are we protected from an accidental or unauthorized ballistic missile attack from a Chinese ballistic missile submarine, which, as you know, the Chinese are now deploying? If not, when will we?

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. ROGERS. I am concerned by Russia's behavior threatening our allies, including the illegal invasion of Ukraine and its violation of the INF treaty. Are you?

Admiral Syring, can you tell me, what is the organic capability of Aegis Ashore to detect cruise missiles? What would the capability be if we deployed SM–2s and SM–6s at those sites in addition to SM–3s?

Admiral Syring, you stated at the hearing that the Aegis Ashore system is not currently configured for cruise missile defense and that the functional difference is, "essentially, the software, with a minor hardware addition." Please provide the following:

1. A detailed explanation of those software and hardware additions and costs and schedules to make those changes if directed to do so.
2. Coverage charts showing cruise missile defense of Europe from Aegis Ashore sites so configured.
3. Coverage charts showing that coverage along with coverage Aegis BMD ships at projected operating areas in Europe.
4. Coverage charts showing cruise missile defense coverage from Aegis BMD ships deployed in Asia at their normal operating areas.

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. ROGERS. This is a painfully tight budget environment and I appreciate you've done the best you could with what you were given. Can you please tell me, if you

had an extra dollar, would you look at the deployment of an East Coast radar to aid in the defense of the homeland from the Iranian ballistic missile threat?

What investments will be required to use Cobra Judy to add to the missile defense sensor coverage of the United States along the East Coast?

Same question but to SBX.

Admiral SYRING. The deployment of an East Coast radar would provide for a more robust defensive capability. The specific benefits of a large X-band radar located on the East Coast are attached. The benefits are based on analysis presented in a 2012 briefing to the House Armed Services Committee. Because of threat developments and the results of ongoing studies, an East Coast radar may be part of our future sensor architecture requirements.

The Missile Defense Agency is updating the 2012 analysis for a new report required by Section 235 of the National Defense Authorization Act for Fiscal Year 2014. The new report will address sensor capabilities, including relocatable land- and sea-based capabilities. We will provide an updated response upon completion of the report. Cobra Judy is no longer available for integration into the Ballistic Missile Defense System. The Navy removed the vessel from service and it is being sold for scrap. The costs for relocating the Sea Based X-band radar (SBX) to the East Coast follows:

- Assume SBX returns to full operation (i.e., no longer in Limited test support status)
- Include $17.1 million (M) in fiscal year (FY) 2015 to move SBX by heavy transport vessel
- Include an off-shore support vessel ($30M/year). Resupply would be conducted from the nearest port

Full Operations Atlantic (Base Year 2014 $M)

FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total
135.7	141.7	146.9	125.8	112.6	135.1	797.8

Mr. ROGERS. Two administrations, including the current one, supported forward-deployed missile defense sites in Poland to provide added and needed protection of the homeland. Those homeland defense deployments have now been cancelled. Have we replaced them in any way?

What could an East Coast missile defense site provide you to defend the United States?

Why is it important to continue planning for such a deployment?

Admiral SYRING. Yes. On March 15, 2013 the Secretary of Defense announced a series of steps the United States is taking to stay ahead of the challenge posed by Iran and North Korea's development of longer-range ballistic missile capabilities. Specifically, the Secretary committed to shifting resources from the terminated SM–3 IIB program to fund the deployment of 14 additional GBIs as well as the development of advanced kill vehicle technology to improve the performance of future GBIs. These steps enable added protection against missiles from Iran while also providing additional protection against the North Korean threat.

There has been no decision made to pursue a potential future Continental United States (CONUS) interceptor site (CIS). However, such a site would provide increased battlespace and capacity but it would come with significant materiel and service support costs.

The Department is preparing a CIS contingency plan and conducting an Environmental Impact Statement in accordance with section 227 of the Fiscal Year 2013 National Defense Authorization Act. Preparation of an EIS and contingency plan would reduce the time required to field a CIS, should a decision be made to do so.

Mr. ROGERS. From a policy perspective, can you please help me understand why we deploy missile defenses to protect our aircraft carriers from Chinese ballistic missiles but we do not deploy missile defenses to protect our cities from Chinese nuclear missiles?

Ms. BUNN. We have the capability to protect our aircraft carriers from ballistic missiles in order to ensure freedom of action and the ability to project power around the globe to protect U.S. interests.

The DOD is committed to ensuring defense of the U.S. homeland against limited long-range missile attacks from countries such as North Korea and Iran. With regard to China and Russia, our homeland missile defenses are not designed to counter their advanced long-range missile capabilities because defending against the quantity and quality of their ICBMs would be technologically impractical and cost

prohibitive. We remain confident that Chinese and Russian ballistic missile attacks on the U.S. homeland are deterred by other means. Despite not being capable of coping with large-scale Chinese or Russian missile attacks, the Ground-based Midcourse Defense (GMD) system would be employed to defend the United States against limited missile launches from any source.

Mr. ROGERS. Why does Russia deploy missile defense? Why does it have a nuclear-armed missile defense? Have you been briefed on Russia's missile defense modernization plans? Does Russia design its missile defense systems with U.S. nuclear forces in mind? Is Russia deterred from building more advanced missile defenses out of a concern for upsetting the "strategic balance" between the U.S. and Russia?

Ms. BUNN. Russia has long deployed missile defenses around Moscow; we presume it is to protect Russian leadership from U.S. intercontinental ballistic missiles. My understanding is that Russians view the Russian system as not upsetting the strategic balance because it complies with the terms of the Anti-Ballistic Missile Treaty, even after the United States withdrew from the Treaty.

Mr. ROGERS. Is it important Poland buy an interoperable NATO system as it considers such a procurement for its air and missile defense tender? Do you agree that the procurement of U.S. systems offer Poland an opportunity to obtain state-of-the-art technology and to strengthen bilateral relations?

Ms. BUNN. It is important that the missile defense system Poland procures be interoperable with the NATO ballistic missile defense system.

While we would naturally prefer that Poland procure a U.S. system, the United States recognizes Poland's right to purchase whatever missile defense system it chooses to purchase. If they choose to procure a U.S. system, doing so would provide Poland the best state-of-the art missile defense capability, would strengthen our bilateral relationship, and would ease integration with U.S. national systems and the NATO BMD architecture.

Mr. ROGERS. What would you worry about if Turkey acquired a Chinese missile defense system? Why would you not want that system to be connected or networked with U.S. systems? What if the system was established as an "indigenous" system, but clearly was comprised of Chinese technology and systems?

Ms. BUNN. The possibility of Turkey acquiring a Chinese-made missile defense system is a concern. Without full technical insight, NATO will not likely allow the Chinese system to be connected to the NATO ballistic missile defense system due to cyber-related concerns.

Even if Turkey acquires an "indigenous" system that is largely composed of Chinese technology and systems, without full technical insight, we believe that it would still not likely meet the strict standards that must be met before any missile defense system could be connected to the NATO system.

Mr. ROGERS. The Commander of Northern Command has outlined a series of tests and experiments of a homeland cruise missile defense. Do you support this initiative? What countries are the principal threats?

Do you agree with the Commander that Russian cruise missiles pose a rising threat?

Why is it that we deploy defenses against Russian cruise missiles, which may be nuclear-capable, but not Russian ballistic missiles?

Ms. BUNN. Yes, I support those initiatives by the Commander of USNORTHCOM. I am happy to discuss this further in a classified setting.

The ballistic missile defenses deployed for the protection of the U.S. homeland are designed to counter a ballistic missile attack from states such as North Korea and Iran. Development and fielding of a system to address the numbers and sophistication of Russian and Chinese long-range ballistic missiles would be technically impractical and prohibitively expensive.

Mr. ROGERS. According to the GAO, "although the dates MDA plans to declare technical capability for EPAA have not changed, the capability to be delivered and the understanding of its performance is more limited than initially planned." Ms. Bunn, please explain what is going on here. Can you please provide the committee this week the detailed technical requirements for the EPAA?

Ms. BUNN. The European Phased Adaptive Approach (EPAA) is intended to protect U.S. forces and NATO European populations and territory from ballistic missiles launched from the Middle East.

The first EPAA phase became operational in 2011. The next two phases remain on schedule with supplemental upgrades to be delivered as they are developed, tested, and deployed. That means there will be an operational missile defense site in Romania in 2015 and another site in Poland in the 2018 timeframe, along with the deployment of more capable versions of the Standard Missile-3 interceptor.

Planned evolutionary upgrades for elements of the ballistic missile defense system are typical for any deployed system, and delivery of upgrades will not negatively affect the ability of each element to remain fully operational.

I defer to Admiral Syring for the detailed technical requirements for U.S. missile defense capabilities in Europe.

Mr. ROGERS. Is the Administration considering a NATO common pool of SM–3 interceptors should the European Allies upgrade their ships with the SM–3 capable launchers and radars?

Ms. BUNN. The Administration is open to all options that could enhance European missile defense. Discussions about the creation of a Standard Missile (SM)-3 interceptor pool have taken place at NATO. The United States has encouraged Allies to make contributions to NATO missile defense and would welcome Allied contributions to a common interceptor pool. To date, no NATO European country possesses surface combatants capable of firing SM–3 interceptors, and no NATO European country has announced plans to modify its ships to do so.

QUESTIONS SUBMITTED BY MR. COOPER

Mr. COOPER. After three back-to-back flight intercept tests (two CE–II and one CE–I failures), are you confident we have a reliable and effective missile defense system?

General MANN. Yes. Although we have experienced a series of unsuccessful tests, the Warfighter remains confident in our operational capability to defend against a limited ballistic missile attack. Our confidence is based on the successful results of the previous CE–I flight tests, the January 2013 non-intercept controlled flight test of the CE–II ground-based interceptor, the present operational employment guidelines, and the Missile Defense Agency's ongoing testing, modifications, and failure review board results.

Mr. COOPER. With North Korea and Iran developing additional capabilities, are we staying ahead of the threat or are we currently catching up to the threat? Can we reliably stay ahead of the threat?

General MANN. The Ballistic Missile Defense System currently provides the capability to defend the homeland against a limited ballistic missile attack from either country. As their ballistic missile abilities mature, we must continue to enhance key system components, such as sensor discrimination capabilities and the reliability of the exoatmospheric kill vehicle, to remain ahead of the intercontinental ballistic missile (ICBM) threat. Predictable resources, the correct test cadence, and focusing on the most urgent priorities, will greatly assist in outpacing a limited ICBM threat to the homeland.

Mr. COOPER. Where would you spend your next dollar?

General MANN. Improving our sensor capabilities is the Warfighter's highest Ballistic Missile Defense System priority. Persistent sensor discrimination and enhanced tracking capabilities will provide immediate qualitative improvements for countering ballistic missile defense threats. The next Warfighter priority is increasing ground-based interceptor reliability by redesigning the exoatmospheric kill vehicle.

Mr. COOPER. Please explain the rationale for focusing on midcourse defense, rather than boost-phase missile defense?

General MANN. The Missile Defense Agency developed and deployed mid-course systems because the technology was more mature than boost-phase systems and provided the Warfighter earlier capabilities to counter a limited ballistic missile threat. The effectiveness of boost-phase systems is currently limited by intelligence challenges and exacerbated by the short reaction time required to counter the threat missile. Presently, mid-course defense affords more time to track the threat, make threat assessments, perform discrimination missions, and engage the target than that of a boost-phase defense system. The Missile Defense Agency, as well as each Service, continues to pursue and develop technologies, such as high energy lasers, that have potential for future boost-phase applications.

Mr. COOPER. Why is it in U.S. interests for the EPAA to be a U.S. contribution to NATO? What would be the impact for U.S. and NATO security if a NATO country suffered a missile attack from Iran?

General MANN. The United States is committed to common defense through Article 5 of the North Atlantic Treaty, which provides that an attack on one is an attack on all. The United States is contributing the European Phased Adaptive Approach (EPAA) to missile defense not only to protect Allied cities, but also to protect deployed U.S. military personnel and U.S. citizens abroad.

Mr. COOPER. How did your requests for missile defense funding fare in the FY15 budget request? Were your requests prioritized?

Admiral SYRING. The Missile Defense Agency's (MDA) President's Budget (PB) 2015 requests were prioritized and well-received. Our PB 2015 submission fared well especially given the Department's tight budget constraints.

Mr. COOPER. After three back-to-back flight intercept tests (two CE–II and one CE–I failures), are you confident we have a reliable and effective missile defense system?

Admiral SYRING. Yes, I am confident that we have a reliable and effective missile defense system. Based on our analysis of the data from the successful January 2013 non-intercept controlled flight test of the CE–II GBI (CTV–01), we plan to conduct FTG–06b, an intercept flight test, this summer. CTV–01 demonstrated the successful dampening of the vibration environments that affected the navigation system and resulted in the failure of the FTG–06a mission conducted in December 2010. FTG–06b will demonstrate the ability of the CE–II EKV to discriminate and intercept a lethal object from a representative ICBM target scene. The FTG–07 failure investigation is nearly complete. Once the investigation is concluded, we will take steps to make any fixes to the fleet that need to be made for both the CE–I and CE–II EKVs.

Mr. COOPER. Will you commit to neither deploy nor procure additional ground-based interceptors (GBIs) until we have a successful flight intercept test?

Admiral SYRING. Yes. I strongly support fly-before-you-buy acquisition. The Missile Defense Agency plans to conduct a successful intercept flight test of each GBI configuration before procuring or deploying such a configuration.

Mr. COOPER. With North Korea and Iran developing additional capabilities, are we staying ahead of the threat or are we currently catching up to the threat? Can we reliably stay ahead of the threat?

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. COOPER. Where would you spend your next dollar?

Admiral SYRING. I support the President's budget request for fiscal year 2015. The present BMDS design and Concept of Operations (CONOPS) represent a performance plateau that the Missile Defense Agency (MDA) investment strategy for EKV is formulated to overcome. The MDA investment goals reduce the cost of kill vehicle (KV) production; improve reliability, capacity, and capability at all inventory levels; forestall obsolescence against the evolving threat; and maximize common standards and technology across all future interceptor programs.

The MDA systems engineering process is based on allocating integrated BMDS requirements that balance capability and feasibility across weapons, sensors, and Command, Control, Battle Management and Communications. Consistent with this process and our strategy for improving the robustness of our Homeland defense capability, the MDA will engineer and allocate integrated system requirements that will drive balanced and integrated BMDS development activities for improved discrimination and sensor capabilities. These activities executed in parallel include development of the Long Range Discrimination Radar (LRDR), improved discrimination algorithms and fire control, air and space Electro Optical/Infrared capabilities, and the Next Generation Kill Vehicle.

Mr. COOPER. What are the highest priority improvements being sought in the redesigned EKV?

Admiral SYRING. The priority for the redesigned exoatmospheric kill vehicle (EKV) is to improve reliability and be more producible, testable, reliable, and cost-effective in order to eventually replace the kill vehicle on our current Ground Based Interceptor (GBI) fleet. The redesigned EKV will be built with a modular, open architecture, designed with common interfaces and standards, making upgrades easier and broadening our vendor and supplier base. We are currently assessing concepts, acquisition options, and timelines to test and field the redesigned EKV. Our goal is to begin flight testing the redesigned EKV in fiscal year (FY) 2018.

Mr. COOPER. Is there a boost motor production gap? What is the acquisition strategy for the 14 additional boosters for test and stockpile reliability starting in 2018? And would accelerating production of boosters before confirming the new CBAU booster works add to the existing acquisition risks, and would it even be needed to avoid any potential production break?

Admiral SYRING. No production gap is projected. In addition to the planned Ground-based Midcourse Defense (GMD) booster motor buys, the Missile Defense Agency (MDA) Targets Program has also started to procure similar configurations of these same motors as a reliable launch vehicle for their varied target requirements.

For the additional 14 interceptors, acquisition strategies are under consideration. The MDA will propose an acquisition strategy this summer for the additional Ground Based Interceptors (GBIs).

The Consolidated Booster Avionics Upgrade (CBAU) obsolescence and reliability upgrade effort is primarily focused on the avionics portion of the boost vehicle. The rocket motors themselves are not part of the boost vehicle CBAU, their acceleration (or even their slowdown) would not increase acquisition risks. Accelerating booster production for the additional 14 GBIs is not necessary to fill a production gap but would have the potential to unnecessarily "age" the booster motors and increase storage costs.

Mr. COOPER. Please explain the rationale for focusing on midcourse defense, rather than boost-phase missile defense?

Admiral SYRING. The Ballistic Missile Defense Elements that intercept in the midcourse phase were more mature and ready for testing, production, and deployment than boost-phase systems. The Missile Defense Agency has taken the approach of identifying and developing new technologies which could scale up from laboratory experiments; and design concepts which, if successfully demonstrated, could make future directed energy and kinetic energy boost phase intercept concepts both feasible and affordable. The MDA's President's Budget (PB) 2015 request continues this approach with significant funding allocated for unclassified and classified programs that have potential for boost phase applications in the future.

Mr. COOPER. Do we need to develop 2-stage interceptors earlier rather than later? Why/why not?

Admiral SYRING. No. Employing 2-stage ground based interceptors (GBI) is under consideration as part of the Department of Defense (DOD) directed Homeland Defense Analysis of Alternatives (HLD AoA). The HLD AoA is directed by the Office of the Secretary of Defense Cost Assessment and Programs Evaluation. Combatant Commands and the Joint Staff are participating. After completion of the HLD AoA in late 2014, senior leaders will review the alternatives. Development and employment of 2-stage GBIs are scheduled for flight testing in FY 2019 and FY 2020. This is consistent with the current Missile Defense Agency Integrated Master Test Plan.

Mr. COOPER. Why is it in U.S. interests for the EPAA to be a U.S. contribution to NATO? What would be the impact be for U.S. and NATO security if a NATO country suffered a missile attack from Iran?

Admiral SYRING. The U.S. European Phase Adaptive Approach (EPAA) is needed to defend against the Iranian ballistic missile threat (capable of striking deployed forces, allies, and partners in Europe). Moreover, EPAA has been recognized as the U.S. contribution to North Atlantic Treaty Organization (NATO) ballistic missile defense at the Lisbon (2010) and Chicago (2012) Summits. I defer U.S.-NATO security issues to OSD Policy.

Mr. COOPER. After three back-to-back flight intercept tests (two CE–II and one CE–I failures), are you confident we have a reliable and effective missile defense system?

Ms. BUNN. As a policy official who is often briefed by those who develop and operate the system, I am confident that the Ground-based Midcourse Defense system can defend the United States against a limited intercontinental ballistic missile attack.

Mr. COOPER. Will you commit to neither deploy nor procure additional ground-based interceptors (GBIs) until we have a successful flight intercept test?

Ms. BUNN. Yes; in keeping with the Administration's policy priority to ensure that new capabilities undergo testing that enables assessment under realistic operational conditions before they are deployed, I will not recommend the procurement or deployment of additional interceptors until there is a successful intercept test.

Mr. COOPER. With North Korea and Iran developing additional capabilities, are we staying ahead of the threat or are we currently catching up to the threat? Can we reliably stay ahead of the threat?

Ms. BUNN. To date, neither North Korea nor Iran has demonstrated the capability to target the United States successfully with a long-range missile delivery system; however, North Korea's successful Taepo Dong-2 space launch in December 2012 and Iran's repeated space launch attempts demonstrate a commitment by both regimes to continue their pursuit of such a capability. The decisions announced by Secretary Hagel in March 2013 related to DOD's planned improvements to the Ground-based Midcourse Defense (GMD) system as well as the other initiatives reflected in the President's Fiscal Year 2015 budget would help to ensure our ability to maintain our advantageous position relative to the North Korean and Iranian long-range missile threats to the homeland. DOD assesses the state of the North Korean and Iranian missile programs continually and, as a matter of policy, remains committed to staying ahead of the threat posed by these programs.

Mr. COOPER. Where would you spend your next dollar?

Ms. BUNN. My highest missile defense priority is ensuring the effectiveness and reliability of our homeland missile defenses. To that end, my next dollar of missile defense spending would be focused on addressing the reliability issues associated with the interceptor kill vehicle, and improving our sensors and discrimination capability.

Mr. COOPER. Please explain the rationale for focusing on midcourse defense, rather than boost-phase missile defense?

Ms. BUNN. The United States is pursuing technologies that would address or mitigate most phases of ballistic missile flight. In addition, we are also looking at options left of launch. However, the technology and operational concepts associated with midcourse intercepts are the most mature. The Administration's focus on deploying proven and cost-effective missile defenses to protect the U.S. homeland, as well as our deployed forces and Allies, has led to a concentration on the most mature systems that have been tested under operationally realistic conditions.

In addition, intercepts in the midcourse phase of flight allow for missile defense elements to be placed farther from the adversary. This is advantageous for two reasons. First, many of the missile defense elements can be placed on U.S. or Allied territory where it can be more easily defended and operated on a more permanent basis. Second, because the midcourse phase of flight is generally longer and happens later than the boost phase, it allows more time to identify a ballistic missile launch, then to track and engage the missile effectively.

Mr. COOPER. Why is it in U.S. interests for the EPAA to be a U.S. contribution to NATO? What would be the impact be for U.S. and NATO security if a NATO country suffered a missile attack from Iran?

Ms. BUNN. The United States is committed to common defense through Article 5 of the North Atlantic Treaty, which provides that an attack on one is an attack on all. The United States is contributing the European Phased Adaptive Approach (EPAA) to missile defense not only to protect Allied cities, but also to protect deployed U.S. military personnel and U.S. citizens abroad.

QUESTIONS SUBMITTED BY MR. GARAMENDI

Mr. GARAMENDI. Do you need additional funds for an East Coast site contingency in FY15? Why/why not?

General MANN. I support Section 227 of the Fiscal Year 2013 National Defense Authorization Act that directs evaluation and environmental impact assessments of potential U.S. missile defense sites. From a Warfighter's perspective, there is no need for additional funding in Fiscal Year 2015. Should a decision be made to field a third U.S. site, there will associated personnel and support costs. The Department will plan and request these necessary resources through the authorization and appropriations process.

Mr. GARAMENDI. What efforts are you pursuing to strengthen homeland missile defense?

General MANN. Both the U.S. Army and the Joint Functional Component Command for Integrated Missile Defense (JFCC IMD), as a component of the U.S. Strategic Command, are continuing efforts to strengthen homeland missile defense capabilities.

Within the Army, we provide trained and ready missile defense forces and capabilities to address today's homeland defense requirements. These forces constantly rehearse threat scenarios and participate in missile defense exercises and wargames to ensure they maintain their high state of readiness. The Army also continues to pursue missile defense technologies and to provide critical testing assets.

At JFCC IMD, we continue to collaborate across the military enterprise to increase the integration of existing capabilities in order to maximize efficiency and effectiveness to protect the homeland. Specifically, we work in partnership with U.S. Northern Command, the Missile Defense Agency, and the other Combatant Commands to synchronize operational-level missile defense planning, identify and address gaps and deficiencies within the system, conduct operations support and asset management for missile defense forces, and to integrate Joint ballistic missile defense training, exercises, and test activities.

Mr. GARAMENDI. General Mann, the primary benefit of a potential East Coast site, if deployed, would be "increased battle space."

What is the primary benefit of increased battle space? Would increased battle space make missile defense more efficient? If so, how? Would increased battle space make missile defense more effective? If so, how? Is the increased battle space merely

more time to fire at incoming targets, or more time to evaluate the results of intercept attempts?

Is the Missile Defense Agency seeking to obtain or improve its "shoot-look-shoot" capability? What are the priorities for attaining or improving this capability? ? Would increased battle space contribute to improving a "shoot-look-shoot" shot doctrine?

What are the Missile Defense Agency's plans for deploying the necessary sensors, such as an X-band radar, and discrimination scheme that are necessary for a shoot-look-shoot shot doctrine against a Middle East threat? Without better sensor capabilities, what would the value of an additional site be, especially in comparison with improving the existing sites and interceptors?

General MANN. A third operational missile defense site would augment and disperse present ground-based interceptor inventory and increase battlespace. The additional time provides the Warfighter increased operational flexibility to assess a ballistic missile event, react to unusual engagement conditions, and apply the most current data to the engagement.

Increased battlespace does enhance the efficiency and effectiveness of countering ballistic missiles. Increasing available reaction time can lead to the optimal intercept location of a threat missile and provides additional decision time to assess the results. The end result of increased battlespace is more efficient and effective use of the ground-based interceptor inventory.

Mr. GARAMENDI. Do you need additional funds for an East Coast Site contingency in FY15? Why/why not?

Admiral SYRING. We support the President's PB15 budget request. No additional funds are required for this activity in fiscal year (FY) 2015. The FY 2014 Department of Defense Appropriations Act provided $20 million to fund the Continental United States Interceptor Site study, contingency plan and Environmental Impact Statement.

Mr. GARAMENDI. What will a 10% increase in homeland missile defense funding provide? How will it help increase confidence in an effective homeland missile defense system?

Admiral SYRING. The program of work supported by the fiscal year (FY) 2015 President's Budget (PB) request is sufficiently resourced to accomplish the Agency's mission to defend the homeland against a limited ballistic missile attack. An additional 10 percent would be allocated to top priority areas including improving the exo-atmospheric kill vehicle (EKV) and improving sensor discrimination. A redesigned EKV would enhance homeland defense by improving the reliability, availability, maintainability, testability and producibility of this key component. Additional investment in sensor discrimination would enhance the ballistic missile defense architecture's ability to discriminate and kill a reentry vehicle with a higher level of confidence and thereby significantly improve Warfighter shot doctrine. Both of these improvements are funded in the FY 2015 PB request and additional resources would be used to accelerate currently planned efforts.

Mr. GARAMENDI. What efforts are you pursuing to strengthen homeland missile defense?

Admiral SYRING. The Missile Defense Agency (MDA) President's Budget 2015 request continues to support extensive improvements to homeland missile defense, including the following:

- Deployment of 14 additional Ground Based Interceptors (GBI) at Ft. Greely to achieve 44 operational GBIs by 2017
- Fielding a second AN/TPY–2 radar in Japan
- Discrimination improvements for homeland defense including development and deployment of a long range discrimination Radar, and near-term and mid-term discrimination initiatives
- Upgrade/redesign of the GBI exoatmospheric kill vehicle to improve reliability
- Supports the Ground-Based Midcourse Defense Return to Intercept program, identifying and correcting across the fleet the failures from the FTG–06a and FTG–07 flight tests
- Continued GBI component testing and refurbishing of currently deployed GBIs to test and improve their reliability
- Continued construction of the GBI In-Flight Interceptor Communication System (IFICS) Data Terminal (IDT) at Fort Drum, New York
- Continued operation of the Sea-Based X-band (SBX) radar, and AN/TPY–2 radars
- Continued procurement of THAAD interceptors
- Procurement of THAAD equipment for an additional battery by 2019
- Preparation of a contingency plan and Environmental Impact Statement for a potential future Continental United States Interceptor Site

- Continues missile defense upgrades of the Early Warning Radars in Clear, Alaska and Cape Cod, Massachusetts

Mr. GARAMENDI. Admiral Syring, the primary benefit of a potential East Coast site, if deployed, would be "increased battle space."

What is the primary benefit of increased battle space? Would increased battle space make missile defense more efficient? If so, how? Would increased battle space make missile defense more effective? If so, how? Is the increased battle space merely more time to fire at incoming targets, or more time to evaluate the results of intercept attempts?

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What are the Missile Defense Agency's plans for deploying the necessary sensors, such as an X-band radar, and discrimination scheme that are necessary for a shoot-look-shoot shot doctrine against a Middle East threat? Without better sensor capabilities, what would the value of an additional site be, especially in comparison with improving the existing sites and interceptors?

Admiral SYRING. [The information referred to is classified and is retained in the committee files.]

Mr. GARAMENDI. Do you need additional funds for an East Coast Site contingency in FY15? Why/why not?

Ms. BUNN. The requested funding for site evaluation and environmental impact studies at the locations identified by the Missile Defense Agency is sufficient. Funding for any additional activity with regard to an additional missile field in the United States would be premature at this time.

Mr. GARAMENDI. What will a 10% increase in homeland missile defense funding provide? How will it help increase confidence in an effective homeland missile defense system?

Ms. BUNN. The program of work supported by the fiscal year (FY) 2015 President's Budget (PB) request is sufficiently resourced to accomplish the missile defense mission of defending the homeland against limited ballistic missile attack. An additional 10% would be allocated to top priority areas including improving the exo-atmospheric kill vehicle (KV) and improving sensor discrimination. A redesigned EKV would enhance homeland defense by improving the reliability, availability, maintainability, testability and producibility of this key component. Additional investment in sensor discrimination would enhance the ballistic missile defense architecture's ability to discriminate and kill a reentry vehicle with a higher level of confidence, and therefore should allow NORTHCOM to use a more efficient allocation of interceptors in the future. Both of these improvements are funded in the FY 2015 PB request, and additional resources would be used to accelerate currently planned efforts.

Mr. GARAMENDI. What efforts are you pursuing to strengthen homeland missile defense?

Ms. BUNN. We are committed to ensuring the reliability and effectiveness of the current Ground-based Midcourse Defense (GMD) system through testing and addressing reliability issues with the interceptor kill vehicle.

In addition, the refurbishment of Missile Field 1 at Fort Greely, Alaska, is underway, and the budget request includes funding for the emplacement of additional Ground-based Interceptors (GBIs) at Fort Greely, for a total of 44 deployed interceptors by the end of 2017.

We are also on track to deploy a second forward-based missile defense radar in Japan. This deployment will provide improved early warning and tracking of missiles launched from North Korea at the United States.

The budget request includes funding for a redesigned kill vehicle that will improve the reliability and effectiveness of the GMD system. The redesigned kill vehicle will improve the reliability and performance of the GBI, and will be easier to build, upgrade, and maintain than the current versions.

The President's Fiscal Year 2015 Budget request also includes funding for development of a Long-Range Discrimination Radar. This radar would provide persistent sensor coverage and improve discrimination capabilities against threats to the United States from North Korea.

We are conducting Environmental Impact Studies for a potential third missile site in the United States to field additional interceptors if required.

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